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June 28, 2023

File: G23L3-001

Susan Blake, Acting SAO
Hamlet of Fort McPherson
PO BOX 57
Fort McPherson, NT X0E 0J0

Sent by email

Dear Susan,

Re: Fort McPherson Municipal Water Licence – Renewal Issuance Package – Water Licence G23L3-001

The Gwich'in Land and Water Board (Board) met on June 27, 2023 and considered the Application Package submitted by the Hamlet of Fort McPherson, for the renewal of Water Licence G03L3-001 for municipal water use and the deposit of waste in accordance with the *Waters Act*.

The Board has approved Water Licence (Licence) G23L3-001 (attached) for a term of ten years effective June 27, 2023, and expiring June 26, 2033. The Licence is supported by the Board's Reasons for Decision. These documents are posted to the Board's Public Registry.¹

The Board's decisions on submissions that were considered in conjunction with the renewal Application Package are set out below.

Submissions Approved

- Sewage Disposal Facilities Operations and Maintenance Plan Version 2.0
- Water Treatment Facilities Operations and Maintenance Plan Version 2.0
- Spill Contingency Plan Version 2.0

Submissions Not Approved

- Solid Waste Disposal Facilities Operation and Maintenance Plan (SWDF OMP) V.2.0

The Board requires that the community revise SWDF OMP V.2.0 and submit SWDF OMP V.3.0 to the Board for approval within 90 days of Licence Issuance. SWDF OMP V.3.0 shall include:

¹ See GLWB Online Registry www.glwb.com for file [G23L3-001](#)

- A proposed location for new SNP reference station 1696-7;
- Updates to SNP manual that pertain to additional parameter requirements; and
- A confirmation of waste pile slope angles, and a description of mitigation strategies that will be employed to deter the nesting to Bank Swallows.

Submission Requirements

Please refer to Annex B of the Licence for a complete summary and timetable of submissions required for this Licence.

Contact information for Inspectors and Analyst

Please note that the Inspectors referred to in the Licence can be contacted at the regional GNWT-ENR offices.² The Analyst referred to in the Surveillance Network Program annexed to the Licence can be contacted at the Taiga Environmental Laboratory.³

Licence Processes and Additional Information

Sections 5 and 6 of the Board's *Guide to the Water Licensing Process*⁴ (Guide) contain detailed information on licence enforcement and potential post-issuance processes, such as amendments to conditions, and assignment to another company. Please be familiar with these sections of the Guide and reach out to Board staff with any questions about Board processes related to the Licence.

Full cooperation of The Hamlet of Fort McPherson is anticipated and appreciated. Please contact GLWB Regulatory Specialist AlecSandra Macdonald at (867) 777-4954 with any questions or concerns regarding this letter.

Yours sincerely,



Elizabeth Wright
Chair, Gwich'in Land and Water Board

BCC'd to: GLWB Distribution List
Attached: Water Licence G23L3-001
Reasons for Decision

² See GNWT-ENR Regional Offices webpage (<https://www.enr.gov.nt.ca/en/regional-offices>) for regional contact information.

³ See GNWT-ENR Taiga Environmental Laboratory webpage (<https://www.enr.gov.nt.ca/en/services/taiga-environmental-laboratory>) for contact information.

⁴ See GLWB Policies and Guidelines webpage for MVLWB [Guide to the Water Licensing Process](#).



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Water Licence G23L3-001

Pursuant to the *Waters Act* and the Waters Regulations,
the Gwich'in Land and Water Board grants this Water Licence to:

The Hamlet of Fort McPherson

(Licensee)

of PO BOX 57, Fort McPherson NT, X0E 0J0

(Mailing Address)

hereinafter called the Licensee, to proceed with the following undertaking, subject to the annexed definitions and conditions contained therein:

Location:	Fort McPherson, NT
Water Management Area:	Northwest Territories 03
Purpose:	Municipal Water Use and Deposit of Waste
Type:	B Renewal
Quantity of Water not to be exceeded:	60, 000 m ³ per year
Effective Date:	June 27, 2023
Expiry Date:	June 26, 2033

Elizabeth Wright, Chair
Gwich'in Land and Water Board

Leonard DeBastien, Witness

Type B Water Licence G23L3-001

Hamlet of Fort McPherson– Municipal Water Licence

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Part A: Scope and Defined Terms

Scope:

		Condition Title
1.	This Licence entitles the Licensee to use Water and deposit Waste for municipal undertakings at Fort McPherson, NT.	SCOPE
	The scope of this Licence includes the following:	
	a) Withdrawal of Water for municipal purposes;	
	b) Deposit of Waste to the Solid Waste Disposal Facilities;	
	c) Deposit of Waste to the Sewage Disposal Facilities;	
	d) Construction, operation, and maintenance of the Solid Waste Disposal Facilities;	
	e) Construction, operation, and maintenance of the Sewage Disposal Facilities;	
	f) Construction, operation, and maintenance of the Water Treatment Facilities; and	
	g) Progressive Reclamation and associated Closure and Reclamation activities.	
2.	This Licence is issued subject to the conditions contained herein with respect to the use of Water and the deposit of Waste 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. Any change made to the <i>Waters Act</i> and/or the Waters Regulations that affects licence conditions and defined terms will be deemed to have amended this Licence.	LEGISLATION SUBJECT TO CHANGE
3.	Compliance with this Licence does not relieve the Licensee from responsibility for compliance with the requirements of any applicable federal, territorial, or municipal legislation.	LEGISLATIVE COMPLIANCE

Defined Terms

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

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

Bagged Toilet Wastes Disposal Facilities – comprises the area within the Solid Waste Disposal Facility and associated structures designed to contain bagged toilet Wastes (honey bags)

Board – Gwich'in Land and Water Board, established under Part 3 of the *Mackenzie Valley Resource Management Act*.

Closure and Reclamation – the process and activities that facilitate the return of areas affected by the Project to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities.

Closure and Reclamation Plan (CRP) – a document, developed in accordance with this Licence, that clearly describes the Closure and Reclamation for the Project.

Construction – any activities undertaken during any phase of the Project to construct, build, upgrade, or replace any structures, facilities, or components of, or associated with, the Project.

Discharge – a direct or indirect deposit or release of any Water or Waste to the Receiving Environment.

Effluent – a Wastewater Discharge.

Effluent Quality Criteria (EQC) – numerical or narrative limits on the quality or quantity of the Waste deposited to the Receiving Environment.

Engagement Plan – a document, developed in accordance with the MVLWB *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, that clearly describes how, when, and which engagement activities will occur with an affected party during the life of the Project.

Engineered Structure – any structure or facility related to Water Use or the deposit of Waste that is designed by a Professional Engineer.

Freeboard – the vertical distance between the Water or Wastewater line and the lowest elevation of the effective Water or Wastewater containment crest on the upstream slope of a containment structure.

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

Groundwater – as defined in section 1 of the Waters Regulations: all water in a zone of saturation below the land surface, regardless of its origin.

Hazardous Waste - a Waste which, because of its quantity, concentration, or characteristics, may be harmful to human health or the environment when improperly treated, stored, transported, or discharged.

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

Licensee – the holder of this Licence.

Maximum Average Concentration – the concentration of a parameter that cannot be exceeded by the running average of any four consecutive analytical results.

Minister – the Minister of the Government of the Northwest Territories – Environment and Climate Change.

Professional Engineer – a person registered with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists to practice as a Professional Engineer in the Northwest Territories as per the territorial *Engineering and Geoscience Professions Act* and whose professional field of specialization is appropriate to address the components of the Project at hand.

Progressive Reclamation – Closure and Reclamation activities conducted during the operating phase of the Project.

Project – the undertaking described in Part A, Condition 1.

Receiving Environment – the natural environment that, directly or indirectly, receives any deposit of Waste from the Project.

Remediation – the removal, reduction, or neutralization of substances, Wastes, or hazardous materials from a site in order to prevent or minimize any adverse effects on the environment and public safety, now or in the future.

Runoff – the overland flow of Water or Wastewater that occurs when precipitation, meltwater, or other Water is not absorbed by the land.

Seepage – any Water or Waste that drains, passes through, or escapes from any structure designed to contain, withhold, divert, or retain Water or Waste.

Sewage – all Toilet Wastes and Greywater.

Sewage Disposal Facilities (SDF) – the area(s) and structures designated to contain and treat Sewage.

Solid Waste Disposal Facilities (SWDF) – the area(s) and structures designated to contain solid Waste.

Spill Contingency Plan (SCP) – a document developed for the Project in accordance with INAC's *Guidelines for Spill Contingency Planning*.

Surveillance Network Program (SNP) – a monitoring program required by this Licence and detailed in Annex A.

Toilet Wastes – all human excreta and associated products, not including Greywater.

Traditional Knowledge – As defined by Gwich'in Tribal Council's *Working with Gwich'in Traditional Knowledge In The Gwich'in Settlement Region*, that body of knowledge, values, beliefs and practices passed from one generation to another by oral means or through learned experience, observation and spiritual teachings, and pertains to the identity, culture and heritage of the Gwich'in. This body of knowledge reflects many millennia of living on the land. It is a system of classification, a set of empirical observations about the local environment, and a system of self-management that governs the use of resources and defines the relationship of living beings with one another and with their environment.

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

Waste – as defined in section 1 of the *Waters Act*:

- a) a substance that, if added to water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water to an extent that is detrimental to its use by people or by an animal, fish or plant, or
- b) water that contains a substance in such a quantity or concentration, or that has been so treated, processed or changed, by heat or other means, that it would, if added to other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water to the extent described in paragraph (a) and includes
- c) a substance or water that, for the purposes of the *Canada Water Act*, is deemed to be waste,
- d) a substance or class of substances prescribed by regulations made under subparagraph 63(1)(b)(i),
- e) water that contains a substance or class of substances in a quantity or concentration that is equal to or greater than a quantity or concentration prescribed in respect of that substance or class of substances by regulations made under subparagraph 63(1)(b)(ii), and
- f) water that has been subjected to a treatment, process or change prescribed by regulations made under subparagraph 63(1)(b)(iii).

Waste Disposal Facilities – the area(s) and structures designated for the disposal of Waste, including, but not limited to, the Sewage Disposal Facilities and Solid Waste Disposal Facilities.

Wastewater – any Water that is generated by Project activities or originates on-site, and which contains Waste, and may include, but is not limited to, Runoff, Seepage, Sewage, and Effluent.

Wastewater Treatment Facilities – the area(s) and structures designated for the treatment of Wastewater.

Water – as defined in section 1 of the *Waters Act*: water under the administration and control of the Commissioner, whether in a liquid or frozen state, on or below the surface of land.

Watercourse – as defined in section 1 of the *Waters Regulations*: a natural watercourse, body of Water or Water supply, whether usually containing Water or not, and includes Groundwater, springs, swamps, and gulches.

Waters Regulations – the regulations proclaimed pursuant to section 63 of the *Waters Act*.

Water Treatment Facilities – the area(s) and structures designed to collect, treat, and supply Water for the Project.

Water Use – as defined in section 1 of the *Waters Act*: a direct or indirect use of any kind, including, but not limited to,

- a) a diversion or obstruction of waters,
- b) an alteration of the flow of waters, and
- c) an alteration of the bed or banks of a river, stream, lake or other body of water, whether or not the body of water is seasonal, but does not include a use connected with shipping activities that are governed by the *Canada Shipping Act, 2001*.

	Condition	Condition Title
	Part B: General Conditions	
1.	The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.	COPY OF LICENCE
2.	The Licensee shall take every reasonable precaution to protect the environment.	PRECAUTION TO PROTECT ENVIRONMENT
3.	In conducting its activities under this Licence, the Licensee shall make every reasonable effort to consider and incorporate any scientific information and Traditional Knowledge that is made available to the Licensee.	INCORPORATE SCIENTIFIC INFORMATION AND TRADITIONAL KNOWLEDGE
4.	In each submission required by this Licence or by any directive from the Board, the Licensee shall identify all recommendations based on Traditional Knowledge received, describe how the recommendations were incorporated into the submission, and provide justification for any recommendation not adopted.	IDENTIFY TRADITIONAL KNOWLEDGE
5.	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 noted.	REFERENCES
6.	The Licensee shall ensure all submissions to the Board: <ul style="list-style-type: none"> a) Are in accordance with the MVLWB <i>Document Submission Standards</i>; b) Include a conformity statement or table which identifies where the requirements of this Licence, or other directives from the Board, are addressed; and c) Include any additional information requested by the Board. 	SUBMISSION FORMAT AND CONFORMITY
7.	The Licensee shall ensure management plans are submitted to the Board in a format consistent with the MVLWB <i>Standard Outline for Management Plans</i> , unless otherwise specified.	MANAGEMENT PLAN FORMAT
8.	The Licensee shall comply with all plans - including revisions, approved pursuant to the conditions of this Licence.	COMPLY WITH SUBMISSIONS AND REVISIONS

9.	The Licensee shall conduct an annual review of all approved plans and make any revisions necessary to reflect changes in operations, contact information, or other details.	ANNUAL REVIEW
10.	The Licensee may, at any time, propose changes to any plan by submitting revisions to the Board, for approval, a minimum of 90 days prior to the proposed implementation date for the changes. The Licensee shall not implement the changes until approved by the Board.	REVISIONS
11.	The Licensee shall revise any submission and submit it as per the Board's directive.	REVISE AND SUBMIT
12.	If any date for any submission falls on a weekend or holiday, the Licensee may submit the item on the following business day.	SUBMISSION DATE
13.	The Licensee shall comply with the Schedules , which are annexed to and form part of this Licence, and any updates to the Schedules as may be made by the Board.	COMPLY WITH SCHEDULE(S)
14.	The Licensee shall comply with the Surveillance Network Program , which is annexed to and forms part of this Licence, and any updates to the Surveillance Network Program as may be made by the Board.	COMPLY WITH SURVEILLANCE NETWORK PROGRAM
15.	The Schedules, the Surveillance Network Program, and any compliance dates specified in this Licence may be updated at the discretion of the Board.	UPDATES TO COMPLIANCE DATE(S)
16.	The Licensee shall comply with all directives issued by the Board in respect of the implementation of the conditions of this Licence.	COMPLY WITH BOARD DIRECTIVES
17.	The Licensee shall ensure signs are posted for all active Surveillance Network Program stations. All sign(s) shall be located and maintained to the satisfaction of an Inspector.	POST SURVEILLANCE NETWORK PROGRAM SIGN(S)

18.	The Licensee shall install, operate, and maintain meters, devices, or other such methods for measuring the volumes of Water used and Waste discharged to the satisfaction of an Inspector.	MEASURE WATER USE AND WASTE DISCHARGED
19.	Beginning March 31, 2024 and no later than every March 31 thereafter, the Licensee shall submit an Annual Water Licence Report to the Board and an Inspector. The Report shall be in accordance with the requirements of Schedule 1, Condition 1.	ANNUAL WATER LICENCE REPORT
20.	The Licensee shall immediately provide written notification to the Board and an Inspector of any non-compliance with the conditions of this Licence.	NOTIFICATION – NON-COMPLIANCE
21.	The Licensee shall ensure that a copy of any written authorization issued to the Licensee by an Inspector is provided to the Board.	COPY – WRITTEN AUTHORIZATION
Part C: Security		
<i>Section Left Intentionally Blank</i>		
Part D: Water Use		
1.	The Licensee shall withdraw Water for the Project from Deep Water Lake. The Licensee may withdraw water from Water Lake for use on an emergency basis upon written approval by the Inspector, when it is not possible to obtain water from Deep Water Lake.	WATER SOURCES
2.	The Licensee may withdraw a combined total of up to 60,000 m ³ per year of Water from the Water Sources.	MAXIMUM VOLUME
3.	The Licensee shall operate and maintain the Water Treatment Facilities to prevent structural failure and to the satisfaction of an Inspector.	PREVENT STRUCTURAL FAILURE - WATER
4.	The Licensee shall construct and maintain the Water intake(s) with a screen designed to prevent impingement or entrapment of fish.	WATER INTAKE SCREEN

	Part E: Construction	
1.	The Licensee shall ensure that all structures intended to contain, withhold, divert, or retain Water or Waste are designed, constructed, and maintained to minimize the escape of Waste to the Receiving Environment.	OBJECTIVE – CONSTRUCTION
2.	The Licensee shall ensure that all Engineered Structures are constructed and maintained 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.	ENGINEERED STRUCTURES – GENERAL
3.	The Licensee shall only use material that is clean and free of contaminants and is from a source that has been authorized in writing by an Inspector.	CONSTRUCTION MATERIAL – SOURCE(S)
4.	The Licensee shall maintain records of Construction materials for all structures and make them available at the request of the Board or an Inspector.	CONSTRUCTION RECORDS
5.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures, the Licensee shall submit to the Board, for approval, a Design and Construction Plan . The Licensee shall not commence Construction of the Engineered Structure(s) prior to Board approval of the Plan.	DESIGN AND CONSTRUCTION PLAN
6.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures the Licensee shall submit to the Board, Design Drawings stamped and signed by a Professional Engineer. A minimum of 90 days prior to implementing any proposed changes to the Design Drawings, the Licensee shall submit revised Design Drawings to the Board.	DESIGN DRAWINGS
7.	A minimum of ten days prior to the commencement of Construction of any structure(s) intended to contain, withhold, divert, or retain Water or Wastes, the Licensee shall provide written notification to the Board and an Inspector. Notification shall include the Construction commencement date, and the name and contact information for the individual responsible for overseeing the Construction. Written notification shall be provided to the Board and an Inspector if any changes occur.	NOTIFICATION – CONSTRUCTION
8.	The Licensee shall ensure that all Engineered Structures are constructed in accordance with the Design Drawings and approved Design and Construction Plan .	CONSTRUCT AS DESIGNED – ENGINEERED STRUCTURE(S)

9.	<p>Within 90 days of the completion of the Construction of each Engineered Structure, the Licensee shall submit to the Board, an As-Built Report stamped and signed by a Professional Engineer, which shall include, but not be limited to, the following information:</p> <p>a) final as-built drawings of the Engineered Structure(s), stamped and signed by a Professional Engineer;</p> <p>b) documentation, with rationale, of field decisions that deviate from the Design and Construction Plans and/or Design Drawings and any data used to support these decisions.</p>	AS-BUILT REPORT – ENGINEERED STRUCTURE(S)
Part F: Waste and Water Management		
1.	The Licensee shall manage Waste and Water with the objective of minimizing the impacts of the Project on the quantity and quality of Water in the Receiving Environment through the use of appropriate mitigation measures, monitoring, and follow-up actions.	OBJECTIVE – WASTE AND WATER MANAGEMENT
2.	The Licensee shall operate and maintain the Waste Disposal Facilities to prevent structural failure and to the satisfaction of an Inspector.	PREVENT STRUCTURAL FAILURE - WASTE
3.	The Licensee shall minimize erosion by implementing suitable erosion control measures that shall be located and maintained to the satisfaction of an Inspector.	EROSION CONTROL
4.	The Licensee shall not accept Sewage and solid Wastes generated by industrial, commercial, or institutional operators working outside of the local government boundaries of The Hamlet of Fort McPherson unless authorized in writing by an Inspector.	OUTSIDE WASTES – MUNICIPAL
5.	The Licensee shall not accept Hazardous Wastes generated by industrial, commercial, or institutional operators at the Waste Disposal Facilities.	HAZARDOUS WASTES – MUNICIPAL
6.	The Licensee shall not accept hydrocarbon contaminated snow, soil, or water generated by industrial, commercial, or institutional operators at the Waste Disposal Facilities.	HYDROCARBON CONTAMINATED MATERIALS

7.	The Licensee shall comply with the Sewage Disposal Facility Operation and Maintenance Plan , once approved.	SEWAGE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN										
8.	The Licensee shall maintain a Freeboard limit of one metre at the Sewage Disposal Facilities, or as recommended by a Professional Engineer and as approved by the Board.	SEWAGE DISPOSAL FACILITIES – FREEBOARD										
9.	The Licensee shall operate and maintain the Sewage Disposal Facilities to prevent structural failure and to the satisfaction of an Inspector.	MAINTAIN SEWAGE DISPOSAL FACILITIES										
10.	The Licensee shall conduct Annual inspections of the Sewage Disposal Facilities or as otherwise directed by an Inspector or the Board. Records of these inspections shall be made available to the Board or an Inspector upon request.	ANNUAL INSPECTION OF SEWAGE DISPOSAL FACILITIES										
11.	The Licensee shall discharge all Effluent from Sewage Disposal Facilities as described in the approved Sewage Disposal Facilities Operation and Maintenance Plan	EFFLUENT DISCHARGE – SEWAGE DISPOSAL FACILITIES										
12.	<p>The Licensee shall ensure that all effluent discharged from the Sewage Disposal Facilities at SNP station 1696-2</p> <p>a) has a pH value between 6 and 9, and</p> <p>b) meets the following Effluent Quality Criteria (EQC):</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Maximum Average Concentration</th> </tr> </thead> <tbody> <tr> <td>Fecal Coliforms (FC)</td> <td>1 x 10⁶ FC/100mL</td> </tr> <tr> <td>BOD₅</td> <td>120 mg/L</td> </tr> <tr> <td>Suspended Solids</td> <td>150 mg/L</td> </tr> <tr> <td>Oil and Grease</td> <td>5 mg/L and no visible sheen</td> </tr> </tbody> </table>	Parameter	Maximum Average Concentration	Fecal Coliforms (FC)	1 x 10 ⁶ FC/100mL	BOD ₅	120 mg/L	Suspended Solids	150 mg/L	Oil and Grease	5 mg/L and no visible sheen	EFFLUENT QUALITY CRITERIA-SEWAGE
Parameter	Maximum Average Concentration											
Fecal Coliforms (FC)	1 x 10 ⁶ FC/100mL											
BOD ₅	120 mg/L											
Suspended Solids	150 mg/L											
Oil and Grease	5 mg/L and no visible sheen											

13.	The Licensee shall submit analytical results and written notification to the Board and an Inspector at least ten days prior to initiating decant of the Sewage Disposal Facilities.	DECANT NOTIFICATION – SEWAGE DISPOSAL FACILITIES
14.	In the event that Sewage Sludge and sediments originating in the Sewage Disposal Facilities require removal at any time during the term of this Licence, such material shall be managed in the manner described in the approved Sewage Disposal Facilities Operation and Maintenance Plan , or as otherwise authorized in writing by the Board.	SLUDGE REMOVAL
15.	The Licensee shall notify the Board and Inspector, in writing, at least ten (10) days prior to initiating sludge removal	NOTIFICATION OF SLUDGE REMOVAL
16.	All bagged toilet Wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities to the satisfaction of an Inspector.	HONEY BAG DISPOSAL
17.	The Licensee shall comply with the Solid Waste Disposal Facilities Operation and Maintenance Plan , once approved.	SOLID WASTE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN
18.	The Licensee shall, within 90 days of Licence Issuance, submit to the Board for approval a revised Solid Waste Disposal Facilities Operation and Maintenance Plan Version 3.0.	SOLID WASTE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN - REVISED
19.	The Licensee shall maintain the Solid Waste Disposal Facilities to the satisfaction of an Inspector.	MAINTAIN SOLID WASTE FACILITIES
20.	The Licensee shall undertake measures necessary to prevent the spread of windblown Waste to the areas surrounding the Solid Waste Disposal Facilities.	PREVENT WINDBLOW WASTE

21.	Within 24 Months of Licence issuance, the Licensee shall submit to the Board for approval a Solid Waste Disposal Fencing Plan . The Plan shall describe how the Licensee will install and maintain fencing at the Solid Waste Disposal Facility that is capable of capturing windswept Waste, deterring wildlife, and preventing unauthorized persons from entering the site.	FENCING PLAN
22.	The Licensee shall contain all Hazardous materials in such a manner as to minimize the potential for migration of contaminants into any Waters, to the satisfaction of an Inspector.	CONTAIN HAZARDOUS WASTE
23.	Within 12 Months of Licence issuance, the Licensee shall submit to the Board for approval a Hazardous Waste Removal Plan . The Plan shall describe how and when the Licensee will conduct the Clean Up, Clean Start Program for the Solid Waste Disposal Facility hazardous waste area.	HAZARDOUS WASTE REMOVAL PLAN
24.	The Licensee shall not openly burn solid or liquid Waste, except in accordance with the guideline <i>“Municipal Solid Wastes Suitable for Open Burning”</i> , developed by the Government of Northwest Territories - Department of Environment and Climate Change, and in consideration of the guideline for <i>“Solid Waste Management for Northern and Remote Communities”</i> , developed by Environment and Climate Change Canada. Waste burning shall only occur when wind direction and weather conditions mitigate risk to the community.	WASTE BURNING
25.	The Licensee shall inform the Board, Inspector, and GNWT Manager of Forests, at least 24 hours prior to the burning of any Waste.	NOTIFICATION OF WASTE BURNING
26.	The Licensee shall comply with the Water Treatment Facilities Operation and Maintenance Plan , once approved.	WATER TREATMENT FACILITIES OPERATION AND MAINTENANCE PLAN
	Part G: Aquatic Effects Monitoring	
	<i>Section Left Intentionally Blank</i>	
	Part H: Spill Contingency Planning	

1.	The Licensee shall ensure that Unauthorized Discharges associated with the Project do not enter any Waters.	OBJECTIVE – PREVENT WASTE INTO WATER
2.	The Licensee shall comply with the Spill Contingency Plan , once approved.	SPILL CONTINGENCY PLAN
3.	<p>If a spill or an Unauthorized Discharge occurs or is foreseeable, the Licensee shall:</p> <p>a) Implement the approved Spill Contingency Plan referred to in Part H, Condition 2;</p> <p>b) Report it immediately using the NU-NT Spill Report Form by one of the following methods:</p> <ul style="list-style-type: none"> • Telephone: (867) 920-8130 • E-mail: spills@gov.nt.ca • Online: Spill Reporting and Tracking Database <p>c) Notify the Board and an Inspector immediately; and</p> <p>d) Within 30 days of initially reporting the incident, or within a timeframe authorized by an Inspector, submit a detailed report to the Board and an Inspector, including descriptions of causes, response actions, and any changes to procedures to prevent similar occurrences in the future. Written notification shall be provided to the Board and an Inspector if any changes occur.</p>	REPORT SPILLS
4.	The Licensee shall ensure that spill prevention infrastructure and spill response equipment is in place prior to commencement of the Project.	SPILL PREVENTION AND RESPONSE EQUIPMENT
5.	The Licensee shall restore all areas affected by spills and Unauthorized Discharges to the satisfaction of an Inspector.	CLEAN UP SPILLS
Part I: Closure and Reclamation		
1.	The Licensee shall endeavor to carry out approved Progressive Reclamation as soon as is reasonably practicable.	PROGRESSIVE RECLAMATION

2.	A minimum of six months prior to the closure and reclamation of any specific facility included in the scope of the Licence, the Licensee shall submit to the Board, for approval, a facility-specific Closure and Reclamation Plan . The Plan shall be in accordance with Schedule 3.	FACILITY-SPECIFIC CLOSURE AND RECLAMATION PLAN
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Schedule 1 Annual Water Licence Report

	Condition
1.	The Annual Water Licence Report referred to in Part B, Condition 19 of this Licence shall include, but not be limited to, the following information about activities conducted during the previous calendar year:
	a) The monthly and annual quantities in cubic metres of fresh Water obtained from all sources, as required in Part D, Condition 1 of this Licence;
	b) A summary of the calibration and status of the meters and devices referred to in Part B, Condition 18 of this Licence;
	c) A summary of Construction activities conducted in accordance with Part E of this Licence;
	d) A summary of major maintenance activities conducted in accordance with this Licence;
	e) Monthly and annual quantities, in cubic metres, of all Sewage and solid Waste deposited into the Waste Disposal Facilities, identified by disposal location;
	f) Monthly and annual quantities, in cubic metres, of all Sewage and solid Waste deposited into the Waste Disposal Facilities by commercial and industrial operators working outside the municipal boundaries of Fort McPherson
	g) Monthly and annual quantities, in cubic metres, of all Sewage and solid Waste removed from the Waste Disposal Facilities, identified by disposal location;
	h) A summary of sludge management activities, including results of depth and volume measurements, sludge removal, and treatment;
	i) A summary of activities undertaken to install and maintain fencing at the Waste Disposal Facilities;
	j) A summary of activities conducted in accordance with the approved Spill Contingency Plan , referred to in Part H, Condition 2 of this Licence, including: <ul style="list-style-type: none"> i. A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part H, Condition 3 of this Licence; and ii. An outline of any spill training carried out.

	k) A summary of any updates or revisions to the Spill Contingency Plan, Engagement Plan, and/or Operation and Maintenance Plans, conducted under the Annual Review referred to in Part B Condition 9.
	l) A summary of how any Traditional Knowledge, referred to in Part B Condition 4, was incorporated into decision making;
	m) A summary of any Progressive Closure and Reclamation, referred to in Part I, Condition1;
	n) Tabular summaries of all data and information generated under the SNP annexed to this Licence, in Excel format;
	o) A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence;
	p) A summary of results and any action taken as a result of any inspections;
	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 studies requested by the Board that relate to Waste disposal, Water Use or Reclamation, and a brief description of any future studies planned.
	s) Any other details requested by the Board by December 31 of the year being reported.

Schedule 2 Design and Construction Plan

	Condition
1.	<p>The Design and Construction Plan(s) referred to in Condition DESIGN AND CONSTRUCTION PLAN shall include, but not be limited to, the following:</p> <p>a) Information regarding the design of the facilities:</p> <ol style="list-style-type: none"> i. A description of the facilities to be constructed; ii. The proposed location(s) of the facilities, with GPS coordinates and a map to scale; iii. Relevant background information for the area beneath the footprint of the facilities, as deemed adequate by the Professional Engineer responsible for the design, including, but not limited to: the results and data from geotechnical and geochemical investigations; hydrogeological investigations; and programs to characterize soil, rock, Groundwater, ground ice, and ground temperature conditions to the depth expected to be affected by the facilities; iv. A design alternatives analysis; v. Design specifications and performance parameters; vi. Stability analyses; vii. A description of how the design has been optimized for Closure and Reclamation; viii. A description of how climate change projections and considerations have been incorporated into the design; ix. A description of any instrumentation that will be installed as part of the facilities, including locations and rationale; and x. A description of any operations and maintenance requirements associated with the design of the facilities. <p>b) Information regarding the Construction of the facilities:</p> <ol style="list-style-type: none"> i. A Construction schedule, including sequencing information; ii. A description of the materials recommended for Construction, including, but not limited to: <ul style="list-style-type: none"> • sources; • quantities;

	<ul style="list-style-type: none">• physical characteristics; and• geochemical characteristics. <p>iii. A description of any potential effects on the Receiving Environment associated with Construction of the facilities; and</p> <p>iv. A description of any mitigation measures that will be undertaken to minimize the potential impacts identified above.</p> <p>c) Information regarding monitoring during Construction, including:</p> <ul style="list-style-type: none">i. A description of any monitoring that will be conducted to detect potential impacts to the Receiving Environment and evaluate the effectiveness of the mitigation measures described above; <p>d) Information regarding responses to monitoring results during Construction, including:</p> <ul style="list-style-type: none">i. Definitions, with rationale, for Action Levels applicable to the performance of the mitigation measures;ii. and For each Action Level, a description of how exceedances of the Action Level will be assessed and, generally, which types of actions may be taken by the Licensee if the Action Level is exceeded. <p>e) A Quality Control Plan stamped by a Professional Engineer, a component of which includes a plan for a Professional Engineer to supervise and field check Construction activities.</p>
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Schedule 3 Closure and Reclamation Plans

	Condition
1.	<p>With regard to Solid Waste Disposal Facilities being closed, the Facility Specific Closure and Reclamation Plan referred to in Part I, Condition 2, shall address the relevant sections of Environment and Climate Change Canada’s <i>Solid Waste Management for Northern and Remote Communities: Planning and Technical Guidance Document</i>, and shall include, but not be limited to:</p> <ul style="list-style-type: none"> a) A description of the waste(s) composition, placement, volume and tonnage that will remain in the landfill cell, and scaled drawings showing maximum final height of disposal; b) Final cover design, including type and source of cover materials, installation, thickness, permeability, drainage layers, topsoil, vegetative cover, and erosion prevention controls; c) As-built drawings for all facilities, components and installations, including an accurate plot plan, geographic positioning system coordinates and permanent location markers; d) Mapping of all disturbed areas, borrow material areas, and site facilities; e) Final survey to mark designated areas, monitoring wells and/or surface water monitoring locations; f) Site regrading to facilitate storm water management; g) Soil testing in areas where waste was processed or stored (e.g., hazardous and special waste, end-of-life vehicles, bulky waste); h) Appropriate disposal of any waste stored aboveground at the site (e.g., hazardous and special waste, end-of-life vehicles, bulky waste); i) Contaminated site remediation, if required; j) Removal of infrastructure and equipment; k) Post-closure leachate prevention and management; l) landfill gas management, if required; m) Final cover monitoring for stability, erosion and settlement; n) A monitoring plan for surface water and/or groundwater, and erosion and settlement for a minimum post-closure period of 30 years o) Post-closure infrastructure requirements; p) Post-closure operations and maintenance (e.g., cover maintenance, vegetation monitoring, storm water management infrastructure maintenance);

	<ul style="list-style-type: none"> q) Contingency plans for fire, illegal dumping and nuisance control post decommissioning r) Implementation schedule; s) Procedures for notifying the public of the facility closure and alternative disposal facilities; t) Restricting access to the site once closed and removal of any waste that may have been deposited following closure; and u) Future land use goal.
2.	<p>With regard to Sewage Disposal Facilities being closed, the Facility Specific Closure and Reclamation Plan referred to in Part I, Condition 2, shall include, but not be limited to:</p> <ul style="list-style-type: none"> a) Logistical considerations; b) Intended future use of the land after closure; c) Remediation of contaminated material; d) As-built drawings of the entire sewage treatment Facilities, including an accurate plot plan, e) Geographic positioning systems coordinates, and permanent location markers; f) Soil testing results from lagoon and wetland areas; g) Contaminated site Remediation, if required, such as removal of contaminated soil from unlined lagoon and wetland; h) Removal of equipment and structures that will not be used during the closure phase; i) Consideration for altered drainage patterns; j) Choice of capping material, and availability; k) Cover monitoring for stability, erosion, and settlement; l) Post-closure monitoring plan of sludges, sediments, surface water, Groundwater, and erosion to ensure that the site does not pose unacceptable risks to human or environmental health; m) Environmental management systems (if necessary) for leachate, Groundwater, and surface water; and n) Signage installation indicating closure in progress, and Facilities no longer accepting sewage.

Annex A: Surveillance Network Program (SNP)

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 June 27, 2023.
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 Condition ANNUAL WATER LICENCE REPORT 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 stations is subject to the approval of an Inspector. The Licensee shall work with an Inspector to determine suitable locations for sampling stations.
3. All sample collection, 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	Coordinates	Sampling Frequency	Sampling Parameters
1696-1(a)	Deep Water Lake	67.39741°, -134.43016°	Monthly	The monthly and annual volumes withdrawn shall be measured in cubic metres or litres.
1696-1(b)	Water Lake	67.42797°, -134.86089°	Monthly	The monthly volumes withdrawn shall be measured in cubic metres or litres.
1696-2	Effluent discharge at Sewage Decant Control Structure	67.45098°, -134.81388°	<ul style="list-style-type: none"> • Prior to the commencement of decant • A minimum of four times during decant, with samples taken a minimum of one week apart. 	<ul style="list-style-type: none"> • Ammonia Nitrogen • BOD₅ • CBOD₅ • Fecal Coliform • pH • Total Suspended Solids • Oil and Grease
1696-3	Outflow of Sewage Lake	67.44014°, -134.85852°	At least twice per year: preferably during high flow (following spring break-up) and low flow (before freeze-up) discharge conditions.	<ul style="list-style-type: none"> • Ammonia Nitrogen • BOD₅ • CBOD • Fecal Coliform • pH • Total Suspended Solids • Oil and Grease
1696-4	Discontinued	n/a	n/a	n/a

1696-5	Run-off from Solid Waste Disposal Facilities	67.45034°, -134.81702°	Twice per year, preferably in July and October	<ul style="list-style-type: none"> • Ammonia Nitrogen • BOD₅ • COBD₅ • Fecal Coliform • pH • Oil and Grease • Total Suspended Solids • Total Phenols • Total Arsenic • Total Cadmium • Total Chromium • Total Cobalt • Total Copper • Total Manganese • Total Mercury • Total Nickel • Total Lead • Total Iron • Total Zinc • Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) • Total Petroleum Hydrocarbons (F1 F2, F3, F4 CCME Fractions) • Polycyclic Aromatic Hydrocarbons (PAHs)
1696-6	Effluent (combined stream) discharge prior to entering Peel River	67.46203°, -134.86629°	Twice per year, preferably in July and October	<ul style="list-style-type: none"> • Ammonia Nitrogen • BOD₅ • CBOD₅ • Fecal Coliform • pH • Total Suspended Solids • Oil and Grease

1696-7	Reference Station	TBD, up gradient of SWDF	Twice per year, preferably in July and October	<ul style="list-style-type: none"> • Ammonia Nitrogen • BOD₅ • COBD₅ • Fecal Coliform • pH • Oil and Grease • Total Suspended Solids • Total Phenols • Total Arsenic • Total Cadmium • Total Chromium • Total Cobalt • Total Copper • Total Manganese • Total Mercury • Total Nickel • Total Lead • Total Iron • Total Zinc • Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) • Total Petroleum Hydrocarbons (F1 F2, F3, F4 CCME Fractions) • Polycyclic Aromatic Hydrocarbons (PAHs)
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Signed on behalf of the Gwich'in Land and Water Board



Elizabeth Wright, Chair



Witness

Annex B: Concordance Table

Annexed to Water Licence G23L3-001 - Items Requiring Submission

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

Condition	Requirement	Submission Timeline
ANNUAL REVIEW (B.9)	Conduct an annual review of all plans, programs, manuals, and studies and make any revisions necessary to reflect changes in operations, contact information, or other details.	No later than March 31 each year.
REVISIONS (B.10)	Submit revised plans, programs, manuals, and studies to the Board, for approval.	A minimum of 90 days prior to the proposed implementation date for the changes.
ANNUAL WATER LICENCE REPORT (B.19)	Submit an Annual Water Licence Report to the Board and an Inspector, in accordance with the requirements of Schedule 1, Condition 1.	Beginning March 31, 2024, and no later than every March 31 thereafter.
NOTIFICATION – NON-COMPLIANCE (B.20)	Notify Board and Inspector of any non-compliance with the Licence	Immediately
DESIGN AND CONSTRUCTION PLAN (E.5)	Submit to the Board, for approval, a Design and Construction Plan , in accordance with the requirements of Schedule 2, Condition 1.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures.
DESIGN DRAWINGS (E.6)	Submit to the Board, Design Drawings stamped and signed by a Professional Engineer.	A minimum of 90 days prior to the commencement of Construction of any Engineered Structures.
NOTIFICATION – CONSTRUCTION (E.7)	Provide written notification to the Board and an Inspector.	A minimum of ten days prior to the commencement of Construction of any Engineered Structure(s).
AS-BUILT REPORT – ENGINEERED STRUCTURE(S) (E.9)	Submit to the Board, an As-Built Report stamped and signed by a Professional Engineer.	Within 90 days of the completion of the Construction of each Engineered Structure.
ANNUAL INSPECTION OF SEWAGE DISPOSAL FACILITIES (F.10)	Conduct an Inspection of the Sewage Disposal Facilities.	Annually

Condition	Requirement	Submission Timeline
DECANT NOTIFICATION – SEWAGE DISPOSAL FACILITIES (F.13)	Submit analytical results and written notification to the Board and an Inspector.	A minimum of ten days prior to initiating decant.
SLUDGE REMOVAL – NOTIFICATION (F.15)	Submit analytical results and written notification to the Board and an Inspector.	A minimum of 10 days prior to the removal of sludge from the Sewage Disposal Facilities for re-use.
SOLID WASTE DISPOSAL FACILITIES OPERATION AND MAINTENANCE PLAN – REVISED (F.18)	Submit to the Board for approval a revised SWDF OMP	Within 90 days of Licence Issuance
FENCING PLAN (F.21)	Submit to the Board for approval a Fencing Plan	Within 24 months of Licence issuance
HAZARDOUS WASTE REMOVAL PLAN (F.23)	Submit to the Board for approval a Hazardous Waste Removal Plan	Within 12 months of License Issuance
NOTIFICATION OF WASTE BURNING (F.25)	Inform the Board and Inspector prior to burning waste.	A minimum 24 hours prior to commencement of burning
REPORT SPILLS (H.3)	Notify Board and Inspector of any Spill or Unauthorized Discharge	Immediately
REPORT SPILLS (H.3)	Submit a detailed report to the Board and an Inspector	Within 30 days of initial spill report
FACILITY-SPECIFIC CLOSURE AND RECLAMATION PLAN (I.2)	Submit to the Board, for approval, a Component-Specific Closure and Reclamation Plan accordance with the requirements of Schedule 3	Six months prior to commencing Closure and Reclamation of any component of the Sewage Disposal Facilities.

Annex C

Revision History table

Table 1: Updates and changes that have been made to Licence G23L3-001 since issuance.

Date	Location of Change	Description of Change



105 Veterans Way
PO Box 2018, Inuvik NT X0E 0T0

Tel: 867-777-4954 Fax 867-777-2304
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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 Application	
File Number	G23L3-001
Company	Hamlet of Fort McPherson
Project	Type B Municipal Water Licence Renewal
Location	Fort McPherson, NT
Activity	Municipal Waste Deposit and Water Use
Date of Decision	June 27, 2023

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1.0 DECISION

On June 27, 2023, the Gwich'in, Land and Water Board (GLWB or Board) met and considered the Application made by the Hamlet of Fort McPherson (Applicant or Hamlet) to the Board for Water Licence G23L3-001 for the use of water and the deposit of waste for municipal purposes. After reviewing the Application and the evidence gathered during the regulatory proceeding, the Board has made the following decisions:

- 1) To issue Water Licence G23L3-001 for a term of 10 years;
- 2) To not approve Version 2.0 of the Solid Waste Disposal Facilities Operations and Maintenance Plan (SWDF OMP), and require SWDF OMP V.3.0 to be submitted to the Board for approval within 90 days of licence issuance;
- 3) To approve Version 2.0 of the Sewage Waste Disposal Facilities Operations and Maintenance Plan;
- 4) To approve Version 2.0 of the Water Treatment Facilities Operations and Maintenance Plan; and
- 5) To approve Version 2.0 of the Spill Contingency Plan.

These Reasons for Decision set out the Board's regulatory process for the Application and rationale for decisions regarding the Licence.

2.0 REGULATORY PROCESS

2.1 Summary of Application

The Hamlet of Fort McPherson applied to the GLWB to renew Type B municipal Water Licence G03L3-001 for a period of ten years. Licenced activities for the 763-person community include the withdrawal of water and the deposit of waste for municipal purposes. These activities are carried out within the community's municipal boundaries and on commissioner's lands, as described below.

Description of Undertaking

The following activities are described in the application:

1. *Water withdrawal from Water Treatment Facilities (WTF)*

The hamlet withdraws fresh water from Deep Water Lake. The pumphouse and access road are on leased Gwich'in Private Lands. Water is trucked to the local water treatment plant, which was upgraded in 2022; the facility uses ultrafiltration, activated carbon and chlorination to treat water, which is stored in underground concrete cells and/or insulated above ground tanks and then distributed to the community via water truck. The hamlet has applied for a licence to withdraw 60,000 m³ per year. Annual reports indicate that the hamlet typically withdraws between 30,000 and 40,000 m³ per year from the lake.

2. *Deposit of Waste to Sewage Disposal Facilities (SDF)*

There are two sewage waste streams in the Hamlet: An above ground piped sewage collection system, which accounts for approximately 15% of the Hamlet's sewage and wastewater, and trucked collection which serves the remaining 85%.

The piped system serves buildings in the community core and offers provides continuous discharges to Sewage Lake, located to the east of the community. The discharge enters a wetland area and minor drainage system that flows north from Sewage Lake, ultimately intersecting the same channel that drains the community's trucked lagoon system. The ultimate receiving water for the discharge channel is the Peel River.

A sewage truck services the remainder of the community and deposits pumpout sewage into the Sewage Lagoon, which is located within the Hamlet Solid Waste Disposal Facility approximately 6 km east of the hamlet. Settling occurs in the lagoon, and sewage effluent discharges through a culvert with a control valve to the south into a vegetated creek. The creek flows along the southern boundary of the solid waste site that travels approximately 265m from the sewage outflow before reaching Aat'oo Zhlt Van (Birch-in-Lake). Aat'oo Zhlt Van is estimated to be approximately 43 Ha in size. The overall flow of surface water and ground water is expected to

flow to the West into the Peel River. From the sewage lagoon outflow, surface water travels approximately 5km before reaching the Peel River.

3. *Deposit of Waste to Solid Waste Disposal Facilities (SWDF)*

Municipal solid waste (MSW) is collected three times a week and transported to the solid waste site (SWS) approximately 6 km from the community. The current SWS has useable space in 3 specific areas around the sewage lagoon and receives the following types of wastes:

1. Domestic garbage from municipal collections;
2. Construction and demolition waste; and
3. Household hazardous waste and bulky waste.

Contents of Application G23L3-001

1. Application Form and Cover Letter
2. Project Description Report
3. Solid Waste Disposal Facilities Operation and Maintenance Plan (SWDF OMP)
4. SWDF OMP Appendices
5. Sewage Disposal Facilities Operation and Maintenance Plan (SDF OMP)
6. Water Treatment Facilities Operation and Maintenance Plan (WTF OMP)
7. Spill Contingency Plan (SCP)

2.2 Timeline

On March 7, 2023, the Applicant submitted Licence Application G23L3-001. The Application was deemed complete on March 16, 2023 and circulated to the Distribution List for public review, using the Online Review System (ORS).¹ As part of the public review, Board staff requested comments and recommendations to assist the Board in reaching its preliminary screening determination and developing appropriate terms and conditions for the licence.

Public notice of the Application was published in *the Inuvik Drum* during the weeks of March 16, 2023 and March 23, 2023 to fulfill paragraph 43(1)(a) of the [Waters Act](#).²

On April 4, 2023 the Gwich'in Tribal Council – Dept of Lands and Resources (GTC DLR) submitted a request to extend the reviewer comment period from April 6, 2023 to April 12, 2023. The extension was granted.

¹ See GLWB Online Review System for [Fort McPherson Type B Municipal Licence Renewal Application \(G23L3-001\)](#)

² See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Notification of Application Inuvik Drum - Mar23_23](#)

By April 12, 2023, the following Parties submitted comments and recommendations regarding the Application to the ORS:

- Gwich'in Tribal Council – Dept of Lands and Resources (GTC DLR);
- Gwich'in Tribal Council – Dept of Cultural Heritage (GTC DCH);
- GNWT Environment and Climate Change (GNWT-ECC);
- Environment and Climate Change Canada (ECCC);
- Fisheries and Oceans Canada (DFO)

On April 18, 2023, the Applicant requested to extend the response period from April 13, 2023, to April 28, 2023. The extension was granted, and on April 27, 2023, the Applicant responded to the Parties' comments and recommendations, and provided an updated Project Description Report, Spill Contingency Plan, and Operations and Management Plans for each of the facilities.^{3,4,5,6,7,8}

On May 4, 2023, Board Staff circulated a draft Water Licence for Public Review on the ORS⁹. By May 25, the following Parties submitted comments and recommendations regarding the Application to the ORS:¹⁰

- GNWT-ECC
- ECCC

By June 1, 2023, the Applicant had not responded to reviewer comments and recommendations on the draft water licence.

On June 27, 2023 the Board met to make decisions regarding the Application. These decisions and related reasons are described in sections [3.0](#) and [4.0](#), below.

³ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27 23](#)

⁴ See GLWB Online Registry for [Fort McPherson – Municipal Water Licence – Revised Project Description Report – Apr27 23](#)

⁵ See GLWB Online Registry for [Fort McPherson – Municipal Water Licence – Spill Contingency Plan V.2.0 – Apr27 23](#)

⁶ See GLWB Online Registry for [Fort McPherson – Municipal Water Licence - Sewage Waste Disposal Facilities Operation and Maintenance Plan V.2.0 – Apr27 23](#)

⁷ See GLWB Online Registry for [Fort McPherson – Municipal Water Licence - Water Treatment Facilities Operation and Maintenance Plan V.2.0 – Apr27 23](#)

⁸ See GLWB Online Registry for [Fort McPherson – Municipal Water Licence - Solid Waste Disposal Facilities Operation and Maintenance Plan V.2.0 – Apr27 23](#)

⁹ GLWB Online Review System for [Fort McPherson Type B Municipal Licence Renewal -Draft Water Licence - \(G23L3-001\)](#)

¹⁰ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Draft Water Licence Jun27 23](#)

3.0 REASONS - Legislative Requirements Related to Licence Issuance

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

In conducting its regulatory process for the Application (as described in section 2.0 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 4.0.

3.1 Consultation, Engagement, and Public Notice

As per paragraph 60.1(a) of the [MVRMA](#), in exercising its authority, the Board must consider the importance of conservation to the well-being and way of life of Indigenous peoples of Canada, specifically those to whom section 35 of the *Constitution Act, 1982*, applies and who use an area of the Mackenzie Valley. Accordingly, the Board works with applicants, affected parties (including Indigenous governments and organizations), and other parties (such as other boards and regulators) to ensure that potential impacts of proposed projects, including impacts on rights under section 35, are understood and carefully considered before decisions are made with respect to the issuance of permits and licences.

The Board's requirements for engagement are set out in the MVLWB [Engagement and Consultation Policy](#) and [Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#). The Policy and Guidelines were developed to ensure that the Board's obligations for achieving meaningful consultation (as set out by land claims and applicable legislation) with all affected parties, including Indigenous groups in the Mackenzie Valley, are met and engagement and consultation results clearly articulated.

The Application was posted to the Board's Public Registry and distributed through the ORS. As the Project is located in the Gwich'in Settlement Area, the appropriate organizations, governments, First Nations, and Indigenous organizations were included in the Distribution List.¹¹ The Distribution List was used throughout this proceeding to circulate submissions, information, and updates relevant to the proceeding. More information about the proceeding for the Applications is provided above in section 4.0.

¹¹ See GLWB Online Review System for [Fort McPherson Type B Municipal Licence Renewal Application Distribution List \(G23L3-001\)](#)

During the Application Public Review, GTC DLR commented that the Applicant had not provided evidence of engagement in its application but confirmed that the Hamlet had initiated communication with the GTC in this regard. The Applicant responded that it had undertaken public community meetings, and had reached out to GTC as well as Tetlit Gwich'in DGO and Tetlit Gwich'in Band Council, noting that the water licence was a renewal of ongoing municipal services, and that the Board's policy makes a provision in not requiring engagement records or plans for municipal undertakings.¹²

As per the Policy, Engagement Records and Engagement Plans are not generally expected for municipal undertakings and municipal public works activities, unless otherwise determined by the LWB. The Board is satisfied that the level of engagement undertaken by the Applicant is appropriate for the nature of the undertaking and confirm that it satisfies the requirements of the LWB Engagement Policy.

In accordance with sections 63 and 64 of the [MVRMA](#), the Board is satisfied that notice of and access to copies of the Application were 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.

3.2 Land Use Plan Conformity

As per section 61 of the [MVRMA](#), where an approved Land Use Plan (GLUP) applies, the Board must confirm conformity with the Land Use Plan before issuing a permit or licence.

The Gwich'in Land Use Plan (GLUP) considers all lands within the Gwich'in Settlement Area.¹³ However, in accordance with Section 3.3 of the Plan, the GLUP does not apply to lands within the boundaries of a municipal government. The Board is thus satisfied that its referral obligations to the GLUP have been satisfied.

3.3 Water Use Fees

There are no water use fees set out in the [Waters Regulations](#) for municipal water use. The Board has thus determined that the Hamlet is exempt from water use fees.

3.4 Existing Licences

During the time period established in the Notice of Application, no licensees or applicants contacted the Board to identify potential effects from the Project on other projects, and there are no other applicants with precedence. Accordingly, with respect to paragraph 26(5)(a) of the [Waters Act](#), Board is satisfied that

¹² See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application - Jun27 23](#)

¹³ See [gwichinplanning.nt.ca](#) for [Nanh' geenijit gwitr'it t'igwaa'in/Working for the Land - Gwich'in Land Use Plan](#)

issuing the Licence to the Applicant will not adversely affect, in any significant way, any existing licensee or any other applicant, provided the Applicant complies with the conditions of the Licence.

3.5 Compensation to Existing Water Users

Paragraph 26(5)(b) of the [Waters Act](#) prohibits the issuance of the Licence unless the Board is satisfied that appropriate compensation has been or will be paid by the Applicant to persons who would be adversely affected by the use of waters, or deposit of waste proposed by the Applicant, at the time when the Applicant filed the Applications with the Board.

The Board received no claims for compensation either during the time period established in the Notice of Application, or during the remainder of the proceeding. Provided the Applicant complies with the Licence conditions, the Board is satisfied there are no water users or persons listed in paragraph 26(5)(b) of the [Waters Act](#) who will be adversely affected by the proposed use of waters or deposit of waste.

3.6 Water Quality Standards

With regards to subparagraph 26(5)(c)(i) of the [Waters Act](#) no water quality standards have been prescribed in the [Waters Regulations](#); however, the MVLWB [Water and Effluent Quality Management Policy](#) applies to the Licence, and the primary objective of the Policy is “protection of water quality in the receiving environment.” This objective is directly reflected in the Licence Condition OBJECTIVE – WATER AND WASTE MANAGEMENT, and in accordance with the Policy and this objective, the Board has set out conditions in the Licence regarding effluent quality criteria, water and waste management, and management plan requirements.

The Board is satisfied that the conditions set out in the Licence are consistent with the Policy and compliance with these conditions will ensure that waste will be collected and disposed of in a manner that will be protective of water quality in the receiving environment. These conditions and detailed rationale are described in Section 4.

3.7 Effluent Quality Standards

With regards to subparagraph 26(5)(c)(ii) of the [Waters Act](#) no effluent quality standards have been prescribed in the [Waters Regulations](#); however, as noted in section 5.9 above, the MVLWB [Water and Effluent Quality Management Policy](#) applies to the Licence. In the absence of prescribed standards, the Policy sets out when and how the Board will include EQC in a licence to protect water quality in the receiving environment, and Appendix 2 of the MVLWB/GNWT [Guidelines for Mixing Zones](#) describes the general principles and standard process the Land and Water Boards (LWBs) will apply in setting EQC for a project. The Board established the EQC for the Project based on both the evidence gathered during the proceeding and in accordance with the Policy and the principles and processes described in the Guidelines. Accordingly, the Board is satisfied that compliance with these criteria and associated conditions will

ensure that effluent from the Project is disposed of in a manner that will be protective of water quality in the receiving environment. These conditions and criteria, and detailed rationale, are further discussed below in Section 4.

3.8 Financial Responsibility

As per paragraph 26(5)(d) of the [Waters Act](#), before the Board can issue the Licence, it must be satisfied that the Applicant's financial responsibility is adequate to complete the Project, including any required mitigation measures, and the closure and reclamation of the site.

The Applicant is a public government, and the Board is confident that the Applicant is capable of meeting any financial obligations set out in the [Waters Act](#) and Licence.

As a result, and for the reasons set out above, the Board is satisfied that the legislated requirement to establish the financial responsibility of the Applicant for the Project has been met.

3.9 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.

The Board has set conditions in the Licence to regulate waste management for the purpose of protecting the receiving environment, and it has also set conditions regarding the use of water for the Project, including limitations on the sources and volumes of water the Licensee can use.

The Board notes that its regulatory process provides opportunities for potentially affected parties to make submissions to the Board, and that the Board did not receive notice of potentially adverse effects on other users of the water and lands in the Project area.

It is the opinion of the Board that compliance with the Licence conditions 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.

3.10 Time Limit

As required under section 48(1) of the [Waters Act](#), the Board made its decision on the Licence within nine months after receiving the complete Application.

3.11 Preliminary Screening

On June 27, 2023 the Board met and confirmed that the activities associated with the Renewal Application were exempt from preliminary screening based on Part 1, Schedule 1, section 2.1 of the Exemption List Regulations to the MVRMA. The has Board reviewed Licence G03L3-001 preliminary screening report dated August 30 2007 ¹⁴ and determined that there have been no modifications to the original development since the screening took place. The Board is satisfied that the requirements of Part 5 of the [MVRMA](#) have been met for the Project. Consequently, no preliminary screening was conducted for application G23L3-001.

The Board notes that the application refers to a possible future expansion of the Solid Waste Disposal Facility, however because the details of the expansion have not yet been provided to the Board, no changes to project footprint or activities have been considered or screened as part of this application.

¹⁴ See GLWB Online Registry for [G03L3-001 - Preliminary Screening - Aug30_07](#)

4.0 REASONS - Licence Terms and Conditions

The Board's determinations and reasons for this decision are set out below.

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

- 1) Existing Licence G03L3-001;
- 2) The Application as submitted by the Applicant for the Project;
- 3) The evidence and submissions received by the Board from the Applicant in relation to the Licence;
and
- 4) The comments and recommendations, evidence, and submissions received by the Board from Parties during the regulatory proceeding.

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 Licence G23L3-001 should be issued, subject to the scope, defined terms, conditions, and term contained therein.

The Licence has been developed to address the Board's statutory responsibilities; to protect the receiving environment and minimize potential adverse effects on other water users; and to address issues within the Board's jurisdiction that were identified and investigated during the regulatory proceeding.

In developing the Licence, the Board considered the MVLWB [Standard Water Licence Conditions Template](#) (Standard Licence Conditions) and included a number of these standard conditions that are relevant to the Project. The Standard Licence Conditions have been established by the Land and Water Boards (LWBs) based on information from LWB policies and guidelines, other applicable guidelines and best practices, meetings with Inspectors, input from LWB staff, and feedback from a public review. Each standard condition has been evaluated against the following characteristics of an ideal condition:

- Clearly part of LWBs' authority;
- Has a clear purpose and rationale;
- Is practical and enforceable; and
- Does not conflict with existing legislation (i.e., is not less stringent).

As noted in [section 3.0](#), Board staff circulated a draft Licence for review. The Draft Licence was developed using previous Licence G03L3-001, the MVLWB Standard Water Licence Conditions Template, other recently issued municipal water licences, and comments and recommendations submitted to the Board during the public review process. The intent of the draft licence to allow Parties to provide specific input to the Board on possible conditions, and the Board considered these review comments and recommendations in making its determination on the Licence conditions. The Standard Licence Conditions include general rationale for each standard condition, and as such, the language of any standard condition included in the Licence is only discussed in detail in the following sections of these Reasons for Decision when it specifically relates to concerns or recommendations raised during the regulatory proceeding. The

Board's reasons for developing and including Project-specific conditions, including discussion of any concerns and recommendations raised regarding these conditions, are detailed in the relevant sections below.

4.1 Term of Licence

The Applicant has applied for a Licence term of ten years. Subsection 26(2) of the [Waters Act](#) allows for a licence term of not more than 25 years for a type B licence. Across the NWT Type B municipal licences are typically issued for between five and ten years.

The Hamlet's original water licence was issued by the Northwest Territories Water Board in 1998 for a five-year term. The GLWB renewed the water licence in 2003 for a four-year term, in 2007 for a six-year term, and in 2014 for a second six year term. In February 2020, the Board renewed the Licence for an additional 6 months to allow the Hamlet additional time to prepare its application. A further one-year term was granted in September 2020, due to extenuating circumstances resulting from the COVID-19 pandemic. The Hamlet has been without a valid licence since the expiry of G03L3-001 in September 2021.

During the public review period, no comments or recommendations pertaining to the Licence term were submitted to the Board.

After reviewing the submissions made during this regulatory process, the Board has determined an appropriate term for the Licence is ten years.

4.2 Part A: Scope and Defined Terms

Part A of the Licence contains the scope and the defined terms used throughout the Licence.

4.2.1 Scope

The scope of the Licence is written to ensure the Licensee is entitled to conduct activities which have been applied for and have been subject to Part 5 of the [MVRMA](#). In setting out the scope of the Licence, the Board endeavoured to provide enough detail to identify and describe the authorized activities, without being unduly restrictive or prescriptive, and to allow for project flexibility, as contemplated in the Application, throughout the term of the Licence.

Based on the activities described in the Licence Application and on the scope outlined in the Standard Licence Conditions, Board staff included a draft scope in the draft Licence that was circulated for public review. The Board did not receive any comments or recommendations

regarding the draft scope during the proceeding, so the Board accepted it as the scope of the Licence.

The conditions in Part A are consistent with the Standard Licence Conditions. These conditions ensure that the scope of the authorization includes all water use and deposits of waste associated with the Project. They also clarify that the Licensee must comply with applicable legislation, including any changes to legislation that are deemed to automatically amend the Licence.

4.2.2 Defined Terms

The Board defined certain terms in the Licence to ensure a common understanding of the conditions, to avoid future differences in interpretation of the Licence, to reflect Project-specific evidence, and to support consistency across licences and permits issued by the LWBs. For the most part, the Board selected applicable defined terms relevant to the Project from the Standard Licence Conditions. Part B: General Conditions and Schedule 1.

4.3 Part B: General Conditions and Schedule 1

Part B of the Licence primarily contains general administrative conditions regarding implementation of the Licence, and compliance with the Licence conditions, Board directives, and LWB policies and procedures. This section also details compliance requirements and review and revision procedures for submissions required under the Licence. These conditions are consistent with the Standard Licence Conditions and are applicable to all licences.

Part B: UPDATES TO COMPLIANCE DATES

Compliance dates are included in the Licence conditions for various submissions and other requirements, and Schedules and a Surveillance Network Program (SNP) are appended to the Licence to set out the detailed requirements associated with specific conditions in the main body of the Licence. The purpose of the Schedules is to provide greater clarity and to aid in interpretation of Licence conditions.

This standard Condition is included in the Licence to clarify that the Board may, at its discretion, update compliance dates, the Schedules, and the SNP, and that such updates are not considered amendments to the Licence, unless otherwise directed by the Board. Such updates may be requested by the Licence in writing at least 90 days in advance or may be initiated by the Board based on the information available to it, and will undergo the Board's public review process before being considered by the Board.

Part B: ANNUAL WATER LICENCE REPORT

The requirements for the Annual Water Licence Report are outlined in Part B: ANNUAL LICENCE REPORT, and Schedule 1, Condition 1. The purpose of the Annual Water Licence Report is to provide the Board and all interested parties the opportunity to be annually updated on Project components and activities and compliance with Licence conditions, and to provide a platform for interested parties to submit comments, observations, feedback, and questions as necessary. The Report is also an important tool for evaluating the effectiveness of the Licence conditions.

In establishing the Annual Report requirements in the Licence, the Board primarily included requirements from the Standard Licence Conditions that are applicable to the Project and reflect the Licence conditions. All of these requirements are intended to provide clarity and summarize information already captured through existing submissions; they are not meant to be onerous. The Board organized these requirements to coincide with the layout of the Licence and to be consistent with the Standard Licence Conditions.

The Annual Water Licence Report is not subject to Board approval. The Annual Report is a submission of monitoring results and activities undertaken during the previous year. If Parties review and have concerns regarding the results reported or activities undertaken as reported in the Annual Report, they can be discussed directly with the Town or addressed through the Board. Annual Reports are posted to the Board's registry, distributed for review and comment, and presented to the Board, even if it is not for approval. Any issues identified can be addressed through a similar process as that with other plans.

For clarity, Annual Water Licence Reports are required each year, regardless of whether the Licensee has conducted any activity during the reporting year.

Part B: ENGAGEMENT PLAN

As explained in section 3.1 above, the Board assesses engagement adequacy through the MVLWB [Engagement and Consultation Policy](#) and [Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#).

As per the Policy, Engagement Records and Engagement Plans are not generally expected for municipal undertakings and municipal public works activities, unless otherwise determined by the LWB.

During public review of Application materials GTC DLR commented that the Applicant had not provided evidence of engagement in its application, but confirmed that the Hamlet had initiated communication with the GTC in this regard (GTC#4). The Applicant responded that it had undertaken public community meetings, and had reached out to GTC as well as Tetlit Gwich'in DGO and Tetlit Gwich'in Band Council,

noting that the water licence was a renewal of ongoing municipal services, and that the Board's policy makes a provision in not requiring engagement records or plans for municipal undertakings.¹⁵

The Board is satisfied that the level of engagement undertaken by the Applicant is appropriate for the nature of the undertaking and confirm that it satisfies the requirements of the LWB Engagement Policy.

4.4 Part C: Conditions Applying to Security Requirements

The Board did not include security requirements in the Licence because it is a municipal licence, and the Applicant is a community government. As per section 94 of the [MVRMA](#), territorial and federal governments are not required to post security for permits; although this exemption does not apply to community governments or licences, it has been Board practice to not require security for municipal projects when the applicant is a community government. The Board is satisfied that the Licensee will be accountable for carrying out closure and reclamation even though a security deposit is not required.

4.5 Part D: Conditions Applying to Water Use

Part D of the Licence contains conditions related to water use for the Project. These are consistent with the Standard Licence Conditions.

The Licence authorizes the Hamlet to withdraw water from Deep Water Lake, with provisions to draw water from Water Lake in the event than an emergency prevents access to Deep Water Lake. SNP records indicate that for the ten-year period between 2010 and 2010, the Hamlet's water used ranged between 30,000 and 41,000 m³ per year. Previous Licences have authorized the withdraw of up to 60,000 m³. In consideration of the Hamlet's historical water use, projected population growth, and the potential for emergency or other contingencies, this volume was carried over in the Draft Licence. During the public review of the Draft Licence, no comments or recommendations to change the maximum allowable withdrawal volumes were submitted to the Board. The Board has thus set the maximum volume of water to be withdrawn from the two water sources, in combination, at 60,000 m³ per year.

4.6 Part E: Conditions Applying to Construction and Schedule 2

Part E and Schedule 2 of the Licence contain conditions applying to Construction activities for the Project. These are consistent with the Standard Licence Conditions. These conditions ensure that Engineered Structures are built to appropriate standards and require the submission of design and engineering

¹⁵ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27 23](#)

reports. The Board can ensure that monitoring requirements are in place prior to, during, and post-construction.

The intent of the DESIGN AND CONSTRUCTION PLAN condition is to ensure the Licensee submits the Design and Construction Plans for Engineered Structures. As these Plans are for Board approval, they will be publicly reviewed, allowing for the incorporation of comments or concerns raised. Schedule 2 was developed from recently issued municipal water licences across the Mackenzie Valley.

4.7 Part F: Conditions Applying to Waste and Water Management and Schedule 3

Part F of the Licence contain conditions applying to Waste and Water management activities for the Project. These are consistent with the Standard Licence Conditions.

Part F: OPERATIONS AND MAINTENANCE PLANS

All applicants must submit detailed waste management information, identifying all types of waste that will be produced by the project (including quantity and quality) and describing the disposal methods that are proposed for each type of waste. Municipal applicants must submit waste management information in Operations and Maintenance Plans (O&M Plans), in accordance with the LWB standard Templates. The Applicant submitted O&M Plans for the proposed wastewater (sewage) treatment systems, water treatment plants, and solid waste disposal facilities. The Board's decisions on these Plans are detailed in the following subsections.

SOLID WASTE DISPOSAL FACILITIES OMP APPROVED, REVISIONS REQUIRED

The Applicant submitted Solid Waste Disposal Facilities Operations and Maintenance Plan Version 1.0 (SWDF OMP V.1.0) as part of the Application materials. The following comments and recommendations were submitted to the Board during the public review: ¹⁶

GTC DLR commented that the dashed lines in Appendix C were unclear (GTC#9), and that the Hazardous Waste section referred to a different community (GTC#10). GTC had concerns regarding signage and segregation of hazardous wastes and requested details demonstrating the Hamlet's segregation practices (GTC #11, #12, #13). GTC recommended updated contact information (GTC #16) and requested an update on fencing initiatives (GTC #17, #18).

The Hamlet responded by providing additional information in revised SWDF OMP V.2.0. It further explained that the hazardous waste management plan was meant to be instructive for how a site

¹⁶ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27 23](#)

is to be managed, and that “the current state of the hazardous waste area requires total clean up and a clean start”. It also confirmed that no updates to fencing initiatives were underway.

ECCC recommended that the Applicant consult it’s “Solid Waste Management for Northern and Remote Communities” when conducting its operations. (ECCC #8). ECC also recommended the Applicant detail measures to prevent solid waste runoff into the adjacent sewage lagoon (ECCC #9), provide rationale for the burning of waste (ECCC#10) and take precautions to mitigate impacts to species at risk (ECC#11), in particular the bank swallows that may nest in vertical waste pile faces (ECCC#12).

The Hamlet responded to the comments and addressed recommendations in SWDF OMP V.2.0, which it submitted as part of its response.

GNWT ECC recommended updates to contact information (GNWT ECC #2, #7) and recommended that the Hamlet manage hazardous waste to the department’s *Guideline for Hazardous Waste Management* (GNWT ECC #3). The department brought forward ongoing concerns regarding the improper storage of hazardous wastes, acknowledged the Hamlet’s plans to remove hazardous waste from site (GNWT ECC#3, #4) and recommended registering as a waste receiver (GNWT ECC#5). GNWT ECC recommended the Hamlet provide a plan to remove hazardous waste stockpiles and provide details on access control measures to prevent future deposits of unsegregated hazardous waste to the SWDF (GNWT ECC#6). GNWT ECC also recommended that the facility be gated and locked (GNWT ECC#9), and that a facility operator be hired to direct people as to where to dump (GNWT ECC #11). The department recommended that the hamlet not allow the deposit of any waste by industrial/ commercial sector (GNWT ECC #10, #12).

The Hamlet responded to the comments and addressed recommendations in SWDF OMP V.2.0, which it submitted as part of its response. It also invited GNWT ECC representatives to contact the Hamlet for more information on the Hazardous Waste workplan outside the public review process.

During the public review of Draft Water Licence of G23L3-001, the following comments and recommendations pertaining to the SWDF and to the SWDF OMP were submitted to the Board: ¹⁷

GNWT ECC recommended the Hamlet notify the Manager of Forests in advance of waste burning to prevent investigations in response to public notifications (GNWT ECC #3). The department also

¹⁷ See GLWB Online Registry Fort McPherson - Municipal Water Licence - Reviewer Comments on Draft Water Licence – Jun27_23

recommended a plan for fencing and access control (GNWT ECC #4, #5), and improvements to hazardous waste storage, as it pertains to used oil and waste fuel management (GWNT ECC #6)

ECCC recommended that the WASTE BURNING condition be updated to reference Climate Change Canada document, "Solid Waste Management for Northern and Remote Communities", and that open burning be permitted only when the wind direction mitigates negative health impacts for nearby residents (ECCC #2). ECCC recommended that following parameters be added to the Annex A: Surveillance Network Program at SNP station 1696-5 (run-off quality from Solid Waste Disposal Facilities): arsenic; Benzene, Toluene, Ethylbenzene, and Xylene (BTEX); Total Petroleum Hydrocarbons (TPH); and Polycyclic Aromatic Hydrocarbons (PAHs). ECCC also recommended that a solid waste reference station be established in an upgradient and unimpacted area to provide reference (background) data for comparison against the Solid Waste Disposal Facilities run-off quality (ECC#6). The Department also requested that the Hamlet clarify if waste piles slopes were greater than 70 degrees and/or if other mitigation measures to detract the nesting of bank swallows at the SWDF were being used (ECCC #8).

The Hamlet did not respond to comments on the Draft Water Licence.

In consideration of the evidence collected during this proceeding, the Board not approved SWDF OMP V2.0. The Board requires the Licensee to submit revised SWDF OMP V.3.0 within 90 days of licence issuance for Board approval. SWDF OMP V.3.0 shall include the following revisions:

- A proposed Location for new SNP reference station 1696-7
- Updates to SNP manual that pertain to additional parameter requirements; and
- A confirmation of waste pile slopes and a description of mitigation strategies that will be employed to deter the nesting to Bank Swallows.

The Board has revised the BURNING WASTE condition to read: *The Licensee shall not openly burn solid or liquid Waste, except in accordance with the guideline "Municipal Solid Wastes Suitable for Open Burning", developed by the Government of Northwest Territories - Department of Environment and Climate Change, and in consideration of the guideline for "Solid Waste Management for Northern and Remote Communities", developed by Environment and Climate Change Canada. Waste burning shall only occur when wind direction and weather conditions mitigate risk to the community.*

The Board has revised the NOTIFICATION OF WASTE BURNING condition to include a notification to the Manager of Forests as well as the Inspector in advance of burning waste.

The Board has also included the FENCING PLAN condition, which requires the Licensee to submit to the Board for approval a fencing plan within 24 months of Licence issuance. The plan shall detail how the

Licensee will install and maintain fencing at the Solid Waste Disposal Facility that is capable of capturing windswept Waste, deterring wildlife, and preventing unauthorized persons from entering the site.

Further, the Board has included the HAZARDOUS WASTE REMOVAL PLAN condition. This condition requires the Licensee to submit to the Board for approval, within 12 months of Licence issuance, a plan that describes how the Licensee will conduct the Clean Up, Clean Start Program for the Solid Waste Disposal Facility hazardous waste area.

SEWAGE WASTE DISPOSAL FACILITIES OMP – APPROVED

The Applicant submitted Sewage Disposal Facilities Operations and Maintenance Plan Version 1.0 (SWDF OMP V.1.0) as part of the Application materials. The following comments and recommendations were submitted to the Board during the public review: ¹⁸

GTC DLR commented that it had no noted concerns with the SWF OMP and appreciated the plain language guide to SNP training (GTC #8).

ECCC recommended the SWF OMP include plans to manage lagoon effluent that did not meet discharge criteria (ECCC #3) and provide information on the treatment and management of the piped sewage that is discharged to sewage lake (ECCC #4). ECCC also recommended that the SDF OMP include additional details on how colour and sludge depth are used as lagoon performance metrics (ECC #5, #6).

GNWT ECC commented that windblow material can impede lagoon performance and should be removed (GNWT ECC #16). It also recommended repairs to discharge chute to ensure all liquids are caught during sewage truck discharge (GNWT ECC #17).

The Hamlet responded to the comments and addressed recommendations in SDF OMP V.2.0, which it submitted as part of its response.

During the public review of Draft Water Licence of G23L3-001, the following comments and recommendations pertaining to the SDF and to the SDF OMP were submitted to the Board: ¹⁹

GNWT ECC recommended that the sampling frequency for SNP station 1696-2 be revised to ensure samples are appropriately spaced out (e.g., a minimum of four times per decant, with samples taken at least one week apart) (GNWT ECC #9). ECCC recommended that the sampling

¹⁸ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27_23](#)

¹⁹ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Draft Water Licence – Jun27_23](#)

frequency for SNP station 1969-3 be updated from once per year to twice per year (at high and low flow conditions) (ECCC #5).

The Hamlet did not respond to comments on the Draft Water Licence.

The Board has approved SWDF OMP V.2.0 because it meets the requirements of the Template and is appropriate for the Project activities.

WATER TREATMENT FACILITIES OMP – APPROVED

The Applicant submitted Water Treatment Facilities Operations and Maintenance Plan Version 1.0 (WTF OMP V.1.0) as part of the Application materials. The following comments and recommendations were submitted to the Board during the public review: ²⁰

ECCC requested clarification regarding the discharge of chlorine residuals (ECCC #1). DFO recommended complying with the *Interim Code of Practice for End-of-Pipe Fish Protection Screens for Small Water Intakes*, and remaining in compliance with the Fisheries Act (DFO #1)

The Hamlet responded to the comments and addressed recommendations in WTF OMP V.2.0, which it submitted as part of its response.

During the public review of Draft Water Licence of G23L3-001, no comments or recommendations pertaining to the WTF and to the WTF OMP were submitted to the Board: ²¹

The Board has approved the WTF OMP 2.0 because it meets the requirements of the Template and is appropriate for the Project activities.

Part F: EFFLUENT QUALITY CRITERIA – SEWAGE

The Board's approach to managing the deposit of waste to the receiving environment through water licence conditions is described in the MVLWB [Water and Effluent Quality Management Policy](#).

The Licence includes EQC for the discharge of sewage from SNP 1696-2 as per Part F: EFFLUENT QUALITY CRITERIA - SEWAGE and Table 1 below.

²⁰ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27 23](#)

²¹ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Draft Water Licence – Jun27 23](#)

Table 1: Sewage Discharge EQC for Water Licence G23L1-002

- a) has a pH value between 6 and 9, and
- b) meets the following Effluent Quality Criteria (EQC):

Parameter	Maximum Average Concentration
Fecal Coliforms (FC)	1 x 10 ⁶ FC/100mL
BOD ₅	120 mg/L
Suspended Solids	150 mg/L
Oil and Grease	5 mg/L and no visible sheen

Determination for EQC for Sewage Discharge

The Board carried over the EQC from licence G03L3-001 to the Draft Water Licence that was circulated for public review. During the public review, GNWT ECC recommended that effluent quality limit for the Oil and Grease parameter be revised to “5 mg/L and no visible sheen”(GNWT ECC #4); the EFFLUENT QUALITY CRITERIA- SEWAGE condition was subsequently updated to reflect this recommendation.

Part F: HAZARDOUS WASTE

In the application materials, the Applicant stated that it would not accept Hazardous Wastes from commercial and/or industrial operators. The Board subsequently added the HAZARDOUS WASTES – MUNICIPAL condition to the Licence. The Applicant confirmed that contaminated soil and snow are treated as hazardous wastes at the SWDF, so the Board also included the HYDROCARBON CONTAMINATED SOIL condition, which prohibits the community from accepting contaminated soil, snow or water from commercial and/or industrial operators. To further ensure that hazardous waste from the ICI sector are not deposited into the SDF or SWDF, and to ensure that facility capacities are not exceeded, the Board included the OUTSIDE WASTES – MUNICIPAL condition, which requires written authorization from an Inspector, prior to the deposit of any waste by commercial and/or industrial operators.

During the public review periods, concerns regarding the segregation and management of the SWDF hazardous waste storage area were submitted to the Board. The GLWB subsequently developed the HAZARDOUS WASTE REMOVAL PLAN condition. This condition requires the Licensee to submit to the Board for approval, within 12 months of Licence issuance, a plan that describes how the Licensee will conduct the Clean Up, Clean Start Program for the SWDF hazardous waste area that was referenced in the Hamlet’s response to these concerns.

4.8 Part H: Conditions Applying to Contingency Planning

Part H of the Licence contains conditions related to spill contingency planning and reporting, reclamation of spills and unauthorized discharges, and emergency response for the Project. These conditions are consistent with the Standard Licence Conditions.

Part H: SPILL CONTINGENCY PLAN

All applicants must describe spill contingency planning. For most applicants, this will be in the form of a Spill Contingency Plan (SCP), developed in accordance with the INAC Guidelines for Spill Contingency Planning, and licences and permits will include standard conditions regarding compliance with the Plan, as approved by the Board.

The Licensee included SCP V.1.0 in the Application. The Board considered this Plan as part of the Application Package.

During the public review of the Application, both GTC DLR and GNWT ECC recommended the contact information within the SCP be updated (GTC #14) (GNWT ECC #13). GTC requested the Hamlet clarify which receiving facilities would receive spill-contaminated materials (GTC #15). GNWT ECC recommended that the Hamlet update the SCP to reflect the reporting process for minor spills (GNWT ECC #8).²²

The Hamlet responded to the comments and addressed recommendations in SCP V.2.0, which it submitted as part of its response.

The Board has approved the SCP V.2.0 because it meets the requirements of the Guidelines and is appropriate for the Project activities.

4.9 Part I: Conditions Applying to Closure and Reclamation and Schedule 3

Part I and Schedule 3 of the Licence contain conditions applying to closure and reclamation, including progressive reclamation of the Project. These are consistent with the Standard Licence Conditions

Part I: CLOSURE AND RECLAMATION PLAN

All applicants must describe closure and reclamation planning. For most applicants, this will be in the form of a Closure and Reclamation Plan (CRP).

²² See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Application – Jun27 23](#)

Conceptual closure and reclamation plans were not included in the O&M Plans submitted with the Application. Due to the on-going nature of municipal operations, municipal licences do not typically require the development of a site-wide CRP; however, prior to closure and reclamation of any specific facility, the licensee must submit to the Board, for approval, a Component-Specific CRP. Accordingly, Condition FACILITY-SPECIFIC CLOSURE AND RECLAMATION PLAN and Schedule 3 set out the requirements for Component-Specific CRPs for the facilities included in the scope of the Licence.

4.10 Annex A: Surveillance Network Program

Annex A of the Licence contains conditions applying to the Surveillance Network Program (SNP). The SNP details the sampling and monitoring requirements related to compliance with several conditions in the Licence. Requirements for measuring flows, volumes, and other data are based on standard licence conditions as are the reporting requirements.

SNP stations 1-5 were established in 1998 under NWT Water Board License N3L3-1696. In 2007, during the renewal of GLWB Licence G03L3-001, the SNP was revised to add 1699-1(a) Water Lake as an additional, emergency water supply. In the same year, station 1696-4 (which monitored effluent discharge prior to entering the Peel) was discontinued, and Station 1696-6 (which monitors the combined effluent stream from both piped and trucked sewage, prior to entering the Peel) was established.

Draft Licence G23L3-001 carried over the SNP locations, sampling parameters and frequencies from Licence G03L3-001. During the public review of the draft Licence, GNWT ECC recommended that the sampling frequency for SNP station 1696-2 be revised to ensure samples are appropriately spaced out (e.g. a minimum of four times per decant, with samples taken at least one week apart) (GNWT ECC #9). ECCC recommended that the sampling frequency for SNP station 1969-3 be updated from once per year to twice per year (at high and low flow conditions) (ECCC #5). ECCC recommended that following parameters be added to SNP station 1696-5 (run-off quality from Solid Waste Disposal Facilities): arsenic; Benzene, Toluene, Ethylbenzene, and Xylene (BTEX); Total Petroleum Hydrocarbons (TPH); and Polycyclic Aromatic Hydrocarbons (PAHs)(ECCC #6). ECCC also recommended that a solid waste reference station be established in an upgradient and unimpacted area to provide reference (background) data for comparison against the Solid Waste Disposal Facilities run-off quality (ECC#6).²³

The Board accepted these recommendations and has updated the SNP program accordingly. The Board has directed the Hamlet to propose an appropriate location for the upgradient reference station, and to provide this as part of the updates to the SWDF OMP revisions that are to be submitted to the Board for approval within 90 days of Licence issuance.

²³ See GLWB Online Registry for [Fort McPherson - Municipal Water Licence - Reviewer Comments on Draft Water Licence – Jun27 23](#)

4.11 Annex B: Table of Submissions

Annex B of the Licence contains a table that summarizes the submissions required by the Licence conditions.

4.12 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 is currently blank because this is a new Licence, but it will be updated throughout the life of the Licence.

5.0 Conclusion

Subject to the scope, definitions, conditions, and terms set out in the Licence, and for the reasons expressed herein, the GLWB is of the opinion that water use, and waste disposal associated with the Project can be completed by the Hamlet of Fort McPherson 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.

Water Licence G23L3-001 and contains provisions that the Board deems necessary to ensure and monitor compliance with the MVRMA, *Waters Act*, and the Regulations made thereunder, and to provide appropriate safeguards in respect of the Hamlet of Fort McPherson’s use of water and deposit of waste as authorized by the Licence.

SIGNATURE



June 27, 2023

Elizabeth Wright, Chair
Gwich'in Land and Water Board

Date