



REQUEST FOR PROPOSALS (RFP)

--

WATER AND WASTEWATER FACILITIES OPERATION AND MAINTENANCE SERVICES

The Corporation of the Town of Moosonee

RFP Posted: January 9th, 2024

Mandatory site visit date: February 6th, 2024

Electronic Proposal submission close date: March 8th, 2024

Town Contacts:

Trevor Keefe, Public Works Manager at trevorkeefe@moosonee.ca

and, Shelley Petten, Clerk/Treasurer at spetten@moosonee.ca



SUMMARY INFORMATION

Type of Contract:	The Town of Moosonee is requesting proposals from qualified firms to provide operations, maintenance & management services for its Water and Wastewater facilities.
Proposal Submission:	<p>-----</p> <p>Proponents should divide their proposals into two separate submissions:</p> <ol style="list-style-type: none"> 1. Proposal Part A – Technical Submission. This submission should contain all technical information in relation to the requirements 2. Proposal Part B – Pricing Submission. This submission should contain all pricing information in relation to the requirements. <p>Submissions will only be accepted electronically by emailing Trevor Keefe, info@moosonee.ca</p> <p>Proponents should:</p> <ol style="list-style-type: none"> 1. Download the Request for Proposals (RFP) from Muniserv – Bids and Tenders or Town website 2. Monitor both sites for any addenda. 3. Register for the mandatory site visit by emailing both Town contacts. 4. Electronically submit the Part A – Technical Submission and Part B – Pricing Submission separately to both Town contacts <p>Submissions by any other means, including hardcopy and fax will be rejected.</p>
RFP Schedule Summary:	<p>-----</p> <p>The receipt of submissions will be based as per the time the electronic system determines it has received the submissions, regardless of when it was sent by the proponent. Any submissions received past the closing date and time will not be accepted.</p> <p style="text-align: center;"> RFP Posted: January 9th, 2024 Mandatory Site Visit: February 6th, 2024 Last day for questions: February 19th, 2024 Proposal Submission Close: March 8th, 2024 RFP Award: March 29th, 2024 </p>
Proposal Acceptance:	<p>-----</p> <ol style="list-style-type: none"> 1. The awarding of this RFP is subject to the approval of the Town of Moosonee Council 2. The Town reserves the right to reject any or all Proposals received. 3. Lowest priced Proposal or any Proposal not necessarily accepted.



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SECTION 1: INSTRUCTIONS TO PROPONENTS

1.1 Invitation for Proposals

The Town of Moosonee (the **Town**) is issuing a Request for Proposal (**RFP**) inviting proposals for services (the **Proposal**) from qualified firms (the **Proponent**) to operate, maintain and manage its Water and Wastewater facilities and their related assets (collectively the **Services**) under a Water and Wastewater Services Agreement contract (the **Agreement**) for an initial five (5) year term with an option for up to an additional five (5) year term at the sole discretion of the Town and subject to acceptance by the successful Proponent. The initial term will run from **June 1st, 2024**, to **May 31st, 2029**. The initial transitional period will be initiated on **May 1st, 2024**.

1.2 Mandatory Site Visit

A site visit will be held on **February 6th, 2024**, starting at **9:00am** from the Municipal Office, 5 First Street, Moosonee ON. and is mandatory for all Proponents. Failure to attend the site visit will disqualify a Proponent from further consideration in the procurement process and any Proposal received from a disqualified proponent will be rejected.

Proponents must register for the site visit via email with Trevor Keefe at trevorkeefe@moosonee.ca by **January 26th, 2024**. An itinerary will be sent out upon registration.

Any questions arising from the site visit can be sent to **both** Town contacts in accordance with section 1.4.4 below and any responses deemed necessary or appropriate will be issued as Addenda through Muniserv – Bids and Tenders and Town website.

1.3 Bidding Process

Submissions signed under seal, executed, and dated will be received by the Township before the closing deadline for the electronic submission of **March 8th, 2024 at 1400**. Since electronic transmission of submissions can be delayed due to issues such as file transfer size or transmission speed, Proponents are advised to allow sufficient time for the upload of submissions. The Town will send an email to the Proponent confirming that their submission was successfully received.

1.3.1 Award Subject to Town Approval

Proposals received after the submission closing deadline will not be considered and will remain unopened. Proponents should note that in lieu of a public RFP opening the total Proposal amounts will be summarized and posted to the Town's website. Proponents should note that the pricing information read out at the Proposal opening is **PRELIMINARY** in nature only and should not be construed as an indication of which Proponent is being awarded the contract. All documentation is subject to review for mathematical accuracies, compliance with the specifications, and compliance with the terms and conditions of the RFP, the completion of which will ultimately determine the successful Proponent. **RFP award is subject to Town Council Approval.**

1.3.2 Proposal Preparation Cost

Proponents agree to prepare and submit Proposals at their own cost. The Town is not liable in any way to pay costs of any kind or nature whatsoever that may be incurred by a Proponent or any third parties in the RFP process relating to the Proposal submission.



If the RFP process is withdrawn or cancelled by the Town at any time, the Town shall not be liable for any Proponent's, losses, damages, or expenses incurred in the preparation and submission of a response to this RFP.

All costs will be the Proponents' sole responsibility.

1.3.3 Town Rights and Disclaimers

The Town, in its sole discretion, reserves the following rights:

- To reject any and all responses, proposals or information received pursuant to this RFP;
- To cancel this RFP with or without the substitution of another RFP;
- To issue additional requests for information or for proposals;
- To take any action affecting the RFP, the RFP process or the services or facilities subject to this RFP that would be in the best interest of the Town;
- To consider any alternative approach or proposal that meets the basic needs of the Town;
- To require one or more Proponents to supplement, clarify or provide additional information in order for the Town to evaluate any proposal submitted;
- To waive any defect or technicality in any proposal received;
- To require that all submissions made pursuant to this RFP shall be in accordance with the laws of Ontario and Canada;
- The Town is under no obligation to confirm whether any Proponent's submission(s) are completed or to request a Proponent to provide additional detail or clarification of any material provided pursuant to this RFP process;
- To negotiate with any Proponent, the final terms, and conditions of the draft Service Agreement.

1.3.4 Amendments

Amendments to a submitted Proposal will be permitted if received by the Town prior to the submission closing time and if endorsed by the same party or parties who signed and sealed the submitted Proposal. A submitted Proposal amendment will state any changes in service commitment and/or any amount(s) to be added to or deducted from the Part B - Pricing Submission.

1.3.5 Withdrawals

A Proponent may withdraw its submission at any time prior to the submission closing deadline by providing notice to the Town by emailing both Town contacts. The withdrawal will be in effect as of the time the notice is received by the Town.

1.3.6 Mode of Submission

Proposals, amendments, and withdrawals submitted by any other manner than by emailing both Town contacts whether by telephone, facsimile, hardcopy will not be considered by the Town.

1.3.7 Procurement Process

Proposals will be called, received, evaluated, accepted, and processed in accordance with the Town's Purchasing Policy (attached as Schedule C). By submitting a Proposal each Proponent agrees to be bound by the terms and conditions of that Policy and those procedures and any amendments to them, as fully as if it were reproduced and attached to this RFP.



1.3.8 Time Extension

The Town may, by addendum, extend the submission closing deadline or any other scheduled dates relating to this RFP.

1.3.9 Public Disclosure

The public disclosure of the contents of a proposal submitted in response to this RFP is governed by the regulations as outlined in the Municipal Freedom of Information and Protection of Privacy Act in the Province of Ontario.

1.3.10 Property of the Town

All requirements, designs, documentation, plans, and other information obtained from the Town by the Proponents in connection with this RFP are the property of the Town and must be treated as confidential and not used for any other purpose than replying to this RFP and the fulfillment of any subsequent contract.

1.4 RFP Documents

1.4.1 Availability

The RFP may be obtained as of the posting date of **January 9th, 2024** on:

- Town of Moosonee website:

OR

- Muniserv: Bids and Tenders site

1.4.2 Errors, Omissions or Discrepancies in RFP Documents

Upon Receipt of RFP, Proponents will verify that the documents are complete. If the RFP is incomplete or upon finding any discrepancies, errors or omissions in the RFP, including those arising following the mandatory site visit, Proponents will immediately notify the Town by emailing both Town contacts in accordance with section 1.4.4 below.

The Town will not be held liable for any discrepancies, errors, or omissions in any part of the RFP process. While the Town has used considerable efforts to ensure an accurate representation of information throughout the RFP process, the information contained therein is supplied solely as a guideline for Proponents and no warranty as to its accuracy, or comprehensiveness is given by the Town.

1.4.3 Examination of RFP for Service Delivery Requirements

Proponents are solely responsible for conducting their own due diligence for the preparation of their Proposal submission to this RFP. Therefore, in addition to attending the mandatory site visit, the Proponent must satisfy themselves by examination of the RFP documents in relation to the conditions existing or likely to exist in connection with the proposal award and as to the service delivery requirements of the RFP.

As such the Pricing Submission must comprise of the following:

- Fixed Price for Core Services
- Price estimate for each Additional Services identified by the Town (or recommended by the Proponent) in this RFP.
- Fully burdened labour rates by role as specified.



Each component of the Pricing Submission must include all the costs specified in this RFP as necessary to deliver those services.

There will be no consideration of any claim after submission of a Proposal that there is a misunderstanding with respect to the conditions or service scope imposed by this RFP. No claims for extra work will be considered. Optional Services estimated by the Proponent must be authorized in writing by the Town prior to commencement of a final Water and Wastewater Services Agreement.

The Proponent must obtain any information or clarification they require, including on service delivery requirements, prior to the submission deadline in accordance with section 1.4.4 below.

1.4.4 Queries from Proponents and Addenda

The Town does not intend to modify the project described herein or the scope of the services. Notwithstanding this intention, the Town reserves the right to modify, amend, substitute, or supplement any part of this RFP at any time by addenda, or notice in writing to the Proponents. The Town will provide Proponents with sufficient time to respond to such modifications including, without limitation, the opportunity to make necessary revisions to their respective submissions.

All inquiries from Proponents regarding the RFP including those arising from the mandatory site visit, the RFP, and/or the service requirements must be in writing by email and directed to both Town contacts and received by the Town by the question deadline of **February 19th 2024, at 10:00 am**.

When a response is deemed necessary or desirable by the Town, including in order to answer queries properly submitted by Proponents. Verbal answers given by the Town to queries are only binding when confirmed by posted written addendum.

Addenda may be issued by the Town by posting them on the Town website or Muniserv, Bids and Tenders.

All addenda become part of the RFP and it is the Proponent's sole responsibility to access and download any changes or addenda to this RFP opportunity. Proponents will reflect all addenda in their Technical Submission and include all costs of all addenda in the Pricing Submission. Any Proposals received that do not include posted addenda and/or change notices may be rejected.

1.5 Proposal Submissions

Proponents will be solely responsible for the delivery of their proposal submissions in the manner and time prescribed.

Both the Technical and Pricing Submissions of the Proposal (see Section 2.10 and 2.11) must be fully completed with all required information, including all applicable blank spaces in the cover sheets for each, and then signed under seal by a duly authorized representative of the Proponent, dated and submitted in a clear and legible manner.

Proposal submissions and any attachments that are unsigned, improperly signed or sealed, conditional, illegible, obscured, improperly prepared, or contain arithmetical errors, erasures, alterations, or irregularities of any kind may, at the discretion of the Town, be declared invalid and rejected.

If a joint venture is responding to the Request for Proposal, the Proposal Package shall be submitted by a Lead Proponent and the others named as subcontractors.



The Town retains the separate right to accept or waive irregularities in the Proposal submissions and any attachments if, in the Town's sole discretion, such irregularities are of a minor or technical nature or, where practicable to do so, the Town may, as a condition of Proposal acceptance, request the Proponent to correct a minor or technical irregularity with no change to the Pricing Submission.

The determination of what is, or is not, a minor or technical irregularity, the determination of whether to accept, waive, or require correction of an irregularity, and the final determination of the validity of a Pricing Submission, will be at the Town's sole and absolute discretion.

1.6 Proposal Submission Duration and Clarification

1.6.1 Duration of Proposal Submissions

Proposal Submissions will remain open to acceptance and will be irrevocable for period of three (3) months (90) days after the Proposal submission closing time.

1.6.2 Clarification of Proposal Submissions by the Town

The Town may, at any time following the RFP closing time, request that any Proponent clarify its proposal submissions by submitting additional information clarifying any matters contained in its proposal submissions and require the relevant Proponent's acknowledgement of the accuracy of that interpretation.

The Proponent will submit such clarifications in writing by email to both Town contacts within three (3) working days following receipt of such a request from the Town, or within such shorter time as the Town may require, and in a form satisfactory to the Town.

The additional information accepted by the Town and written interpretations which have been acknowledged by Proponents will be considered to form part of the Proposals of those Proponents.

The right to request clarification of Proposals by the Town as provided herein is within the sole, complete and unfettered discretion of the Town and is for the Town's sole benefit and may or may not be exercised by the Town at any time and in respect to any or all Proposals. Where in the opinion of the Town the Proposal is ambiguous, incomplete, deficient, or otherwise not acceptable in any aspect, the Town may reject a Proposal either before or after seeking a clarification under this section.

The seeking of a clarification of a Proposal by the Town as provided herein will not in any way oblige the Town to enter into a final Water and Wastewater Services Agreement with that Proponent and will not constitute an acceptance of that Proposal.



SECTION 2: RFP REQUIREMENTS

2.1 Town Contact Information

Trevor Keefe, Public Works Manager trevorkeefe@moosonee.ca
Shelley Petten, Clerk/Treasurer spetten@moosonee.ca
Town of Moosonee Municipal Office
5 First Street
Moosonee, Ontario
P0L 1Y0

2.2 Schedule

RFP Posted:	January 9 th , 2024
Mandatory Site Visit:	February 6 th , 2024, at 9:00 am
Last day for questions:	February 19 th , 2024 at 10:00 am
Electronic Proposal Submission Close	March 8 th , 2024, at 2:00 pm
RFP Award Decision:	March 29 th , 2024

Although every effort will be made to meet all the dates shown, the Town reserves the right to modify any or all dates at its sole discretion.

2.3 Duties of the Town of Moosonee

2.3.1 *Invite Proponents*

Invite Proponents to submit a Proposal for services to operate, maintain and manage its Water and Wastewater facilities and related assets under a contract (the Water and Wastewater Services Agreement) effective June 1st, 2024 for a proposed initial term of 5 years with the option for a renewal term up to 5 years at the sole discretion of the Town and subject to acceptance by the successful Proponent.

2.3.2 *Clarify Purpose of RFP*

The basic objective of the Town in issuing this Request for Proposal (RFP) is to encourage competition among operations firms to determine the most cost-effective manner of providing the labour required for the operation, maintenance and management of the water and wastewater treatment facilities in the Town, and to determine if continuing to contract these services out to a private contractor is a more cost-effective solution than providing these services in-house.

Following evaluation, should the Town decide to contract these services, they intend to negotiate an operation, maintenance, and management services agreement with the Preferred Proponent for an initial five (5) year term with an option for up to an additional three (3) year term at the Town's sole discretion. The initial term will run from June 1st, 2024 to May 31st, 2029



The transitional period will be initiated on May 1st, 2024.

2.3.3 *Select Proponent*

All proposals submitted in response to this RFP will be reviewed by an Evaluation Team consisting of Town CAO (or designate), Public Works Manager (or designate), and Treasurer. Consultants and legal advisors may also be utilized for respective expertise/technical support as required.

The Evaluation Team will select the Proponent who can best deliver the water and wastewater services for the purpose above, based on the submitted Proposals evaluated according to the outlined proposal evaluation criteria (see Section 2.12 Evaluation Criteria and Basis for Scoring). RFP award is subject to Town Council Approval.

2.3.4 *Liaise with Successful Proponent*

Liaise with the successful Proponent through negotiation of a Water and Wastewater Services Agreement to ensure the services delivery by the successful Proponent meets the Town's needs in accordance with its guidelines, policies, and priorities, now and into the future.

2.4 *Town Overview*

The Corporation of the Town of Moosonee is one of two municipalities in the far north of Ontario. Our uniqueness is characterized by no road access. The town has a population of approximately 2,500 people.

Moosonee is located on the Moose River 12 miles south of James Bay at a latitude 51 N 07' and longitude 80 W 35'. The town site is in the Hudson Bay Lowlands, the largest wetland area on earth. Originally settled as a fur trading post by Revillion Freres of Paris in 1903 in competition with the Hudson Bay Company, the town grew in importance with the arrival of the rail in 1932 when Moosonee became a transportation hub for the James Bay coastal communities. Moosonee serves as a gateway to the north and a launching point for further destinations, whether across the Moose River to Moose Factory, or further north up the western coast of James Bay to our neighbouring First Nation communities.

Moosonee is not connected to the road system in Ontario and all travelers arrive in Moosonee by train or plane from either Cochrane, Ontario or Timmins, Ontario.

2.5 *Town Water and Wastewater Overview*

The Town owns the infrastructure for municipal water and wastewater services.

Town Sub-System Classification

Water Treatment Level II
Water Distribution Level II
Waste Water Treatment Level I
Waste Water Collection Level II



Water Treatment System

Water treatment plant rated at 3,000 m³/day (gross maximum daily production) consisting of a dual train package unit, each train rated 1,500 m³/day, consisting of an inline flash mixing tank equipped with mechanical flash mixer, a two stage flocculation tank equipped with variable speed flocculators in each unit, an upflow solids contact clarifier equipped with inclined plate settlers and automatic sludge withdrawal, dual media filters with a maximum surface loading of 8.4 m/hr equipped with water backwash and separate air scour, backwash pumps and air scour compressors with duty and standby units, chemical feed system for primary coagulant, coagulant aid, disinfection and pH correction consisting of chemical storage tanks and metering pumps (duty and standby) for each feed system, instrumentation and monitors including continuous monitoring of water turbidity for raw water and treated water (one per filter unit) and disinfectant residual (equivalent to free chlorine), including structures, standby power, electrical, instrumentation, mechanical, piping and site work.

Wastewater Treatment

Seasonal retention lagoon facility, rated at an average daily flow of 1,466 m³/day, consisting of a two-cell configuration seasonal retention facultative lagoon facility, designed to operate on a fill- and-draw basis, with a usable volume of 165,658 cubic metres per cell, based on a maximum operating depth of 1.8 metres plus an allowance for retention of 0.3 metres of liquid after the seasonal draw down and a freeboard of 0.9 metres.

2.6 Background to the RFP

The Town has reviewed the existing service contract and made additions to the required operational service and maintenance requirements.

In addition to the operational requirements, the Town is currently looking for strong management with a thorough understanding in water and wastewater to aid in the efficient and sustainable operation of critical infrastructure. The town is actively seeking an operating authority that can assume responsibility for the water treatment plant, wastewater lift stations, and distribution system, serving as the regulatory authority for all four subsystems. The enhanced operational service and maintenance requirements incorporated into the service contract underscore the town's commitment to ensuring the highest standards of water and wastewater management. As we embark on this search, the town places a premium on finding a management team with a profound understanding of water and wastewater systems, capable of steering the community towards a future marked by resilient, environmentally responsible, and reliable water services.

2.7 General Performance Expectations for the Services

The successful Proponent will show that it can best deliver the water and wastewater services described in **Schedule A** in a way that reflects the performance expectations of the Town and Council. As such, the Proponent will confirm in the Part A - Technical Submission of its Proposal how it will:

- Meet all applicable Laws.
- Apply good industry practices.
- Maintain Town water and wastewater system assets in a state-of-good-repair.



- Practice good communication to build and maintain a strong partnership with the Town, its staff and Council.

The successful Proponent will show how it will be able to improve service performance and efficiency, reduce system(s) risk, and consider the trends and influences that will impact the water and wastewater systems and services to ensure that these services are “future-proof”. The successful Proponent will also submit Prices for the provision of the services that reflect the importance of ensuring affordable water and wastewater rates in the Town.

2.8 Summary Scope of Services to be Delivered (Detailed in Schedule A)

A summary of the services to be provided for the water and wastewater facilities by the successful Proponent include:

1. **Core Services.** These are the Services that are required to be delivered by the successful Proponent (Contractor) under the final Water and Wastewater Services Agreement with the Town. These Core Services are summarized in Section 2.8.1 (below), and detailed in Schedule A (See Sections A3 and A4). Costs for all Core Services are to be provided in Pricing Table B2-1 (Section B2 - Fixed Price for Core Services) of Part B (see 2.11 below)
2. **Additional Services.** Those services that, in addition to the Core Services, are requested by the Town or recommended by the Contractor during the Term of the Agreement (e.g., engineering services).

2.8.1 Core Services

Services summarized below (and detailed in Schedule A) that are to be provided as Core Services are to be confirmed as such by the Proponent in Part A - Technical Submission and included as part of the Fixed Price for Core Services entered in Part B - Pricing Submission:

1. **Routine asset operations and maintenance services** of water source/ discharge, treatment, distribution, and collection systems that ensure the best use of key resources, including staff, electricity, and chemicals, so as to meet all general and specific service performance targets, minimize costs and minimize the Town’s carbon footprint.
2. **Supervisory services** for non-routine (major) repairs, rehabilitation and replacement of asset projects or programs (i.e., for services typically subcontracted to other third-party contractors). Specific non-routine projects such as major repairs, if delivered by the Proponent, are considered as **Additional Services**, and requested using the Services Request process (as detailed in section A6 in Schedule A)
3. **Management services** used by the Proponent to deliver its services to the Town, including administrative and operational support services (e.g., financial management, human resources management and training, information technology and information
4. **Plans and reports** to be delivered as part of Core Services include:
 - a. Business related progress & performance reports
 - b. Operations related progress & performance reports
 - c. Non-Routine (Major) Maintenance Plan (i.e., Major Repairs, Rehabilitation and Replacement) and related progress & performance reports
 - d. All Regulatory Reports required by All Applicable Laws



5. Additional submissions, including:

- a. Annual submission of certificates of insurance & notification of changes/cancellation
- b. Event notification and reporting
- c. Periodic presentations the Town Council

2.8.2 Additional Services

1. Additional Services (as detailed in Section A6 of Schedule A) shall be provided on a time and materials basis. Specific non-routine projects such as major repairs, if delivered by the Proponent, are considered as Additional Services, and will be requested using the Services Request process (see section A6 in Schedule A).

2.9 Information Required in the Proposal

The proposals prepared by the Proponent will clearly indicate that the document will comply with any applicable provincial and/or federal regulations and will meet all requirements outlined in this request for proposal.

The Proponent will submit the following two documents:

- Part A - Technical Submission (section 2.10)
- Part B - Pricing Submission (section 2.11)

The content and format of the two documents expected from the Proponents is described in the sections below.



2.10 Part A - Technical Submission

Part A - Technical Submission
Information Required (50 Points)

SECTION A1: Cover Sheet



REQUEST FOR PROPOSALS

--

WATER AND WASTEWATER FACILITIES
OPERATION AND MAINTENANCE
SERVICES

The Corporation of the Town of Moosonee

Submitted by:

Name of Firm

Address (Include postal code)

Telephone No. (Include area code)

Name of Person Signing for Firm

Office of Person Signing for Firm

Mandatory site visit date: February 6th, 2024 at 9:00 am local time

Electronic Proposal submission deadline: March 8th, 2024 at 2:00 pm local time.

Submit to:

The Town by emailing
info@moosonee.ca



SECTION A2: Approach & Understanding (20 Points)

1. Describe your overall approach, including:

- How you will reflect Town priorities in your approach to delivering the Services (e.g., affordability, compliance)
- How you will practice good communication with Town staff and engage with management, Council and the community
- What technologies and tools you will bring to this project to complement existing Town systems and enable efficient and effective operations and maintenance (e.g., SCADA, EAMS / CMMS / WMS, mobile tools) and describe what benefits they provide
- How you will transition the existing operations and assume responsibility for the water and wastewater systems at the start of the Initial Term of the Agreement. Include transitioning of existing staff and vendor relationships, assessing asset condition, assuming needed information, and describing transition responsibilities for all parties. Also describe any other necessary transition activities. Include a schedule of key transition activities.

2. Describe your understanding of the Core Service requirements, including:

- How you will apply Good Industry Practices to the provision of the Services
- How will you ensure compliance with the requirements under the DWQMS.
- How you will provide care and protection of the Town's water and wastewater systems and assets to ensure they remain in a state-of-good-repair. Including how you will ensure the right amount of time is spent performing actual maintenance (i.e., wrench-on-bolt time) on the Town's water and wastewater system assets.
- How you will ensure retention of your key staff to reflect the value the Town places on having continuity of staff once they have a good understanding of the Town systems and services and have built a strong relationship with the Town
- What value-added services you will provide at no additional cost (e.g., recommend projects that obtain federal, provincial, or other funding)



SECTION A3: Relevant Company Experience (15 Points)

1. **Describe your organization**, including:

- When you were organized, and if a corporation, when you were incorporated and how many years you have been engaged in providing water and wastewater services for municipal clients.
- The full name, main office address and indicate the offices that would be principally responsible for delivering and supporting the requested services.
- Your organization's vision, mission, and values and how they align with the Town's requirements and priorities.
- Your approach to client partnerships and the way your organization works with small to medium sized municipal clients.
- The added value your organization brings to clients (e.g., corporate capabilities, strengths)

2. **Describe 3 projects where your organization has delivered** water and wastewater system operations, maintenance, and management services to small and medium sized rural communities:

- Summarize recent client projects, including:
 - **Detailed project profiles** for each project that highlight your ability to successfully deliver these services for similar clients (i.e., size, location, services provided)
 - **Individual references** for 3 projects, including client contact name, address, and phone number



SECTION A4: Key Personnel Experience (15 Points)

1. **Describe your project team and their experience delivering similar services,** including:
 - How your team will be organized and work with the Town team (include an organization chart showing both parties), indicating:
 1. Who will lead the team (e.g., manager / ORO)
 2. Who will contribute to the team (e.g., operators, mechanics, technicians, electricians) and how they would contribute.
 3. How the day-to-day interaction with the Town would work.
 - How any specialty staff (e.g., SCADA, water process, assets) not directly on the team would contribute to supporting service delivery at the Town.
 - Your ability to bring in additional water operations, maintenance, or specialty staff on a timely basis to ensure continuity of care and succession planning (“bench strength”)
 - How you will continue to maintain and build staff skills (e.g., stay up on latest regulations, ensure healthy and safe operations, learn new skills)
 - How the team will respond to an emergency, leveraging the organization and engaging the Town
 - **Note:** Any changes to the proposed organizational structure during the initial term must be approved by the Town



SECTION A5: Signed Declaration by Owner/Partner with Authority to Bind

To: The Town of Moosonee

I/We the undersigned hereby offer and agree to the delivery of services for the water and wastewater systems to the Town of Moosonee as described in this Technical Submission. In addition, I/We hereby agree that we have reviewed the Section 3: General Terms and Conditions, including the indemnification and hold harmless requirements, and the insurance requirements that shall meet or exceed those set out in Schedule B unless otherwise agreed to by the Town.

PROPOSAL SUBMITTED BY:

COMPANY NAME:

ADDRESS:

CITY:

POSTAL CODE:

TELEPHONE NUMBER:

FACSIMILE:

EMAIL:

WEBSITE:

SIGNATURE:

PRINT NAME:

TITLE:

DATED:



**Part B - Pricing Submission
Information Required (50 Points)**

SECTION B1: Cover Sheet



REQUEST FOR PROPOSALS

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**WATER AND WASTEWATER FACILITIES
OPERATION AND MAINTENANCE
SERVICES**

The Corporation of the Town of Moosonee

Submitted by:

Name of Firm

Address (Include postal code)

Telephone No. (Include area code)

Name of Person Signing for Firm

Office of Person Signing for Firm

Mandatory site visit date: February 6th, 2024, at 9:00 am local time

Electronic Proposal submission close date: March 8th, 2024 at 2:00 pm local time.

Submit to:

info@moosonee.ca



2.11 Part B - Pricing Submission

SECTION B2: Fixed Price for Core Services (45 Points)

Provide a Fixed Price (Excl. HST) for the provision of Core Services for the first year of the 5- year term of the Agreement into Pricing Table B2-1.

Pricing Table B2-1: 5-Year Fixed Price for Core Services

Services Requested	Fixed Price 2023
Core Services	[ENTER \$]
Annual adjustment (e.g., amount, factor) – if any	[ENTER]

Costs that are to be considered as part of the Core Services Fixed Price calculation include routine operations, maintenance, and management costs, including:

- Salaries and Benefits
- Telephone and telecommunication costs
- Insurance costs
- Vehicle costs
- Training costs

Pricing Table B2-2: Transition Fixed Price

Service	Estimated Price
Provide a fixed cost for all transitional requirements prior to start of the Initial Term	[ENTER \$]

SECTION B3: Time and Materials Pricing Basis (5 Points)

Provide the average fully burdened rate per hour for staff in the positions / roles shown in Table B4-1 below. These rates would be applied to any Additional Services that the Proponent may be requested to deliver by the Town during the Term of the Agreement

Pricing Table B4-1: Rates / Hour for Proponent Resources

	2024 Average Rate Per Hour in \$
• Certified Operator / Operator-Mechanic	[ENTER \$]
• Senior Certified Operator (minimum Class III)	[ENTER \$]
• Lead Hand / Foreperson / Team Lead	[ENTER \$]
• Site Manager / Operations Manager	[ENTER \$]
• Senior Operations Manager	[ENTER \$]
• Technician/Tradesperson (e.g., Millwright / Electrician)	[ENTER \$]
• Senior Technician/Tradesperson (e.g., Instrumentation / Electrical / SCADA)	[ENTER \$]
• Compliance Specialist (e.g., QMS rep)	[ENTER \$]



• Asset Management / Process / Process Control Specialist	[ENTER \$]
• Clerk/Treasurer	[ENTER \$]
• Procurement / Accounting Coordinator	[ENTER \$]
• Project Manager / Engineer	[ENTER \$]
• Senior Engineer	[ENTER \$]

Notes:

1. Indicate any factor(s) that impact the hourly rates for Positions / Roles during the initial term of the Agreement (e.g., annual adjustment factor)
2. Any necessary purchases for these activities will be considered Non-Routine Maintenance (Major Repairs, Rehabilitation, Replacement) and considered to be an Additional Service. Upon Approval from the Town, these items will be paid for as capital expenditures and procured as per the Procurement Policy (Schedule C).

SECTION B4: Signed Declaration by Owner/Partner with Authority to Bind (Mandatory)

SECTION B4: Signed Declaration by Owner/Partner with Authority to Bind	
<p>To: The Town of Moosonee</p> <p>I/We the undersigned hereby offer and agree to the delivery of services for the water and wastewater systems to the Town of Moosonee as described in this Technical Submission. In addition, I/We hereby agree that we have reviewed the Section 3: General Terms and Conditions, including the indemnification and hold harmless requirements, and the insurance requirements that shall meet or exceed those set out in Schedule B unless otherwise agreed to by the Town.</p>	
PROPOSAL SUBMITTED BY:	
COMPANY NAME:	
ADDRESS:	
CITY:	
POSTAL CODE:	
TELEPHONE NUMBER:	FACSIMILE:
EMAIL:	WEBSITE:
SIGNATURE:	PRINT NAME:
TITLE:	DATED:



2.12 Evaluation Criteria and Basis for Scoring

Proponent submissions will be evaluated as shown in the following steps:

1. Part A - Technical Submission will be opened and checked for mandatory submission requirements. Only those Proponents meeting the mandatory requirements will continue to **Step 2**.
2. Part A - Technical Submission will be reviewed and scored based on the description provided in Table 2.12-1 below. Only Proponents that achieve a total score of 70% of achievable technical points or higher (i.e., a minimum score of 35 out of 50) will continue to **Step 3**
3. Part B - Pricing Submission will be opened and checked for any additional mandatory submission requirements. Only those Proponents meeting the mandatory requirements will continue to **Step 4**
4. Part B - Pricing Submission will be reviewed and scored based on the description provided in Table 2.12-1 below.
5. Scores from the Part A - Technical Submission and Part B - Pricing Submission will be added together, and the highest combined total score will form the general basis for the selection of the successful Proponent to provide the services and requirements of this RFP.



Table 2.12-1: Evaluation Criteria and Basis for Scoring

Evaluation Criteria	Maximum Points	Points Scored
PART A - TECHNICAL SUBMISSION	50	
(a) Project Understanding and Approach	20	
(b) Company Experience	15	
(c) Key Personnel Experience	15	
PART B - PRICING SUBMISSION	50	
1. Fixed Price for Core Services (a) Evaluation Formula to be used to calculate points achieved: $\frac{\text{Lowest Proponent's Price}}{\text{Proponent's Price}} \times \text{Maximum Available Points} = \text{Points Achieved}$	45	
Where Price is the 2023 Fixed Price + Transition Price + (subsequent years' FIXED PRICE + any increasing factor over the 5-year) = (Cumulative Total) (b) Example: Lowest Cumulative Price = \$900,000; Proponent's Price = \$1,000,000; Points Available = 45; then Points Achieved = $0.9 \times 45 = 40.5$ Points		
3. Labour rates for Additional Services charged on a Time and Materials basis	5	
Total Points	100	

2.13 Acceptance or Rejection of Proposal Submissions

The submission of Proposals does not obligate the Town to accept any Proposal or to proceed with the procurement process. The Town reserves the right to accept or reject any or all Proposals or to accept any Proposals should it be deemed to be in its best interest to do so in its sole and absolute discretion. The lowest price submission will not necessarily be accepted. A Pricing Submission that contains prices that appear to be out of alignment with the RFP requirements and/or the accompanying technical submission and is judged by the Town to likely adversely affect their interests may, particularly in the absence of an explanation that is acceptable to the Town, be rejected at the sole discretion of the Town.

All submitted Proposals and supporting documentation become the property of the Town and will not be returned.



2.14 Final Services Agreement Negotiations (after Evaluation and Selection)

Town staff intends to select the successful Proponent on March 29th, 2024. The Town intends to then immediately commence negotiations in good faith and on an exclusive basis with the selected Proponent to reach a final Water and Wastewater Services Agreement.

The materials contained in the Proponent's response to this RFP may be attached to any final Water and Wastewater Services Agreement executed between the parties.

Notwithstanding the foregoing, the Town may, at any time in its sole discretion, cease negotiations with the selected Proponent and commence negotiations with another Proponent. In addition, the Town may elect at any time in its sole discretion to cancel the entire process without liability for the cost or expenses incurred by the selected Proponent or any other Proponent in conducting negotiations with the Town or in responding to this RFP.

SECTION 3: GENERAL TERMS & CONDITIONS

3.1 Interpretation

- Any final Water and Wastewater Services Agreement that results from this RFP is the "Agreement."
- "Water and Wastewater Services" means those Core Services agreed to by the Parties to be governed by the Agreement. Such water and wastewater services will include the whole of the work to be performed and materials to be furnished necessary to carry out those services as specified under the RFP or Agreement.
- The successful Proponent in the RFP process will be the "Contractor" in any resulting Agreement if they accept the Town's appointment to perform the water and wastewater services as set out in the terms and conditions in the Agreement.

3.2 Waiver of Claim for RFP Instructions

Proponents expressly waive any and all rights to make any claim against the Town for any matter arising from the Town exercising its rights as stated in these instructions to Proponents.

3.3 Fraud or Bribery

Should the Proponent, any of his/her agents give or offer any gratuity to, or attempt to bribe any member of the awarding body, officer or servant of the Town, or to commit fraud against the Town, the Town will be at liberty to declare that Proponent's proposal submission void forthwith, or to take the whole or any part of the resulting Agreement out of the hands of the Proponent, and to invoke the provisions of termination.

3.4 Due Diligence

The Proponent accepts the systems and the assets and the water and wastewater services requirements in the condition thereof existing at the RFP closing date/effective date of the agreement, and acknowledges that it has investigated and satisfied itself:

1. As to the nature of the Core Services proposed/agreed to.
2. To the best of the Proponent's/Contractor's knowledge, as to the location of and all conditions relating to the systems and the assets including accessibility, general character, surface conditions, utilities, roads, uncertainties of seasonal weather and all other physical, topographical and geographical conditions.



3. As to the general character, quality, quantity and availability of equipment and materials required to execute and complete the Core Services proposed/agreed to.
4. To the best of the Proponent's knowledge, as to all environmental risks, and conditions.
5. As to applicable Laws and restrictions applicable to the Proponent and to the Core Services proposed/agreed to that might affect those water and wastewater services; and all conditions affecting labour, including availability, productivity and administrative practices, including those relating to health and safety, prevailing or applicable to the Core Services or the Additional Services proposed/agreed to.
6. And any failure by the Proponent to discover matters which affect or could affect the Core Services, or the Additional Services proposed/agreed to at the RFP closing date/ effective date shall not relieve the Proponent from its proposal submissions/obligations under this Agreement or otherwise affect the Fixed Price for Transitional Services, the Fixed Price for Core Services or any estimated prices for such Additional Services.

3.5 Relationship Between the Parties

3.5.1 Status of the Contractor

The Proponent will be engaged as an independent contractor for the sole purpose of performing the water and wastewater services. Neither the Proponent nor any of their personnel will be engaged as an employee, servant, or agent of the Town.

3.5.2 Conflict of Interest

The Town recognizes that the Proponent may be performing contract services prior to and during the Term of the Agreement for other parties provided that such performance of other services will not conflict with or interfere with the Proponent's ability to perform the water and wastewater services under this Agreement.

1. Prior to execution of any Agreement, the Proponent will disclose to the Town any potential conflict of interest. If a conflict of interest does exist, the Town may, at its discretion, withhold its execution of the Agreement with the Proponent until the matter is resolved to the satisfaction of the Town.
2. During the Current Term, if the Proponent is retained by another party giving rise to a potential conflict of interest, then the Proponent will so inform the Town and if a significant conflict of interest is deemed to exist by the Town, the Proponent agrees to resolve any such conflicts in favour of the Town by either refusing the new client assignment or taking such steps as are necessary to remove the conflict of interest.

3.5.3 Subcontracting

Unless otherwise provided in the Agreement, the Proponent will obtain the consent of the Town in writing prior to subcontracting or permitting the subcontracting of any portion of the services.

Notwithstanding the above, the Proponent may, without prior consent of the Town, subcontract such portions of the services as is customary in the carrying out of similar agreements. In any subcontract, the Proponent will, unless the Town otherwise consents in writing, ensure that the subcontractor is bound by terms and conditions of the Agreement



3.6 Term of Water and Wastewater Services Agreement

3.6.1 Initial Term

The Agreement is proposed to commence on the **Effective Date** (June 1st, 2024) and, subject to early termination in Section 3.17 will continue in effect for an initial term of 5 years ending on May 31st, 2024 (the “Initial Term”).

3.6.2 Renewal Term

On expiry of the Initial Term, the Agreement may be renewed for up to another 5-year term(s) (a “**Renewal Term**”) subject to the requirements below:

Notice to Renew

- a. The Town will notify the Proponent in writing at least 12 months before the expiry of the Initial Term whether it intends to renew the Agreement.
- b. If the Town gives notice that it intends to renew, the Proponent must notify the Town in writing of its decision to accept or decline the request to renew within 30 days of receiving the Town’s request.
- c. If the Town gives notice under (a) that it does not intend to renew the Agreement, or if the Proponent declines a request to renew under (b) then the agreement will terminate in accordance with Section 3.17 upon expiry of the Current Term or of the agreed to extension period.

Agreement to the Fixed Price on Renewal

If the Town notifies the Proponent that it wishes to renew the agreement and the Proponent accepts then no later than six (6) months before the expiry of the Current Term the parties will negotiate in good faith on a Fixed Price for a Renewal Term. If the parties fail to reach agreement on the Fixed Price and any Adjustment Factor, then the agreement will terminate in accordance with Section 3.17 upon expiry of the Current Term or of the agreed to extension period.

Performance Review

The Town reserves the right to conduct a performance review prior to notifying the Proponent whether it intends to renew the Term of the Agreement.

3.7 Service Inspection and Performance Reviews

The Services and any and all parts thereof will be subject to inspection and acceptance by the Town. The Town reserves the right to conduct performance reviews during the Term of the Agreement including prior to the Town’s decision whether to renew the agreement.

Such reviews may include comparing actual results against the general service performance standards and the performance measures and targets contained in the Schedule A and the Town will draw on reports from that schedule as part of the review process.

The Town reserves the right to request additional information from the Proponent that relates to the water and wastewater systems, assets and services and may engage an appropriate professional to assess service performance or information related to performance.



3.8 Accessibility for Ontarians with Disabilities Act, 2002 (AODA)

The Town is committed to providing equal treatment to people with disabilities with respect to the use and benefit of Town services, programs, and goods in a manner that respects their dignity and that is equitable in relation to the broader public.

All contractors with the Town must comply with all laws applicable to the performance of the work. All deliverables developed by the Proponent for the RFP and as a Contractor for any resulting Agreement, including reports and presentation materials, must be in compliance with AODA Regulation 191/11.

Effective 1 January 2010, third party Contractors who deal with the public or other third parties on behalf of the Town, as well as contractors who participate in developing Town policies, practices or procedures governing the provision of goods and services to members of the public or other third parties, must conform with the Accessibility Standards for Customer Service, O. Reg. 429/07 (Appendix A), under *The Accessibility for Ontarians with Disabilities Act, 2005 (AODA)*.

The Proponent will ensure that AODA training records are maintained, including dates when training is provided, the number of employees who received training and individual training records. Proponents are required to ensure that this information will be made available, if requested by the Town.

3.9 Purchasing Policy and Environmental Purchasing

The Proponent will adhere to the Town's Purchasing Policy (see Schedule, C), as changed from time to time, as a minimum standard, if in the delivery of the services it purchases any goods or materials or subcontract any part of the water and wastewater services to an authorized external contractor, vendor, or supplier.

In particular, the Town is committed to environmentally sound practices in fulfilling its mandate in the planning and provision of materials, services, and programs and, consistent with this policy, the Proponent will commit to the adoption and promotion of environmentally sound practices in the delivery of the Services.

3.10 Proprietary Information

The Town and Proponent each own proprietary information. Each party grants to the other a restricted license to use proprietary information received from the other party during the term of the agreement solely for the purpose of the delivery of the water and wastewater services. Each party acknowledges and agrees that their respective proprietary information will remain the property of that party. Proprietary information is subject to confidentiality.

3.11 Confidentiality

The parties shall strictly maintain confidential and secure all proprietary information provided, directly or indirectly, by the other party pursuant to the agreement. Subject to applicable laws, including relevant legislation related to freedom of information or the protection of privacy, neither party shall directly or indirectly disclose to any person, either during or following the expiry of this agreement any such material or information provided to it by the other party unless they have first obtained the written consent to allow such disclosure from the party who provided the material or information in question.

3.12 Infringement of Intellectual Property Rights

The Proponent warrants that no services and any materials or goods furnished in accordance with



this Agreement will infringe upon any patent, registered industrial design, trademark, trade secret, copyrighted work, or other intellectual property right. The Proponent at its sole cost and expense will defend and hold harmless the Town, its agents, employees, and customers against any and all suits, actions and claims arising out of any and every charge of infringement.

3.13 Municipal Freedom of Information and Protection of Privacy Act

The Town is subject to the *Municipal Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c.M.56, as amended (“MFIPPA”) with respect to, and protection of, information under its custody and control. Accordingly, all documents provided to the Town in response to this RFP and in the performance of the services under any resulting agreement may be available to the public unless the party submitting the information requests that it be treated as confidential. All information is subject to MFIPPA and may be subject to release under the Act, notwithstanding a request to keep the information confidential.

3.14 Dispute Resolution

Negotiation

In the event of dispute arising out of or related to this agreement, the parties shall first use all reasonable efforts to resolve the dispute by negotiation consistent with the general standard of good communication.

Mediation

If the dispute is not satisfactorily resolved by negotiation between the parties, either party shall be entitled to call for the dispute to be referred to a third-party mediator who is agreed to by both parties and the fees and expenses of whom shall be divided equally between the parties. All proceedings facilitated by the mediator are to be conducted by the parties in good faith and without prejudice. If the dispute has not been resolved within 60 days after the appointment of the mediator either party may by notice to the other withdraw from the mediation process.

Participation in mediation is without prejudice and does not bar a party from pursuing other available legal remedies including litigation.

3.15 Indemnification

The Proponent will indemnify and save harmless the Town and its respective directors, officers, employees, and servants from any and all claims, demands, causes of action, loss, costs or damages that the Town may suffer, incur or be liable for resulting from the negligent performance or non-performance of the Proponent of their obligations under any resulting agreement.

3.15 Conditions of Insurance

Upon acceptance of the award of contract by the Town, the successful Proponent shall provide the Town with a Certificate of Insurance confirming that they have obtained insurance that meets or exceeds that set out in Schedule B - Insurance Requirements, unless otherwise agreed to by the Town.

All such insurance policies shall be endorsed to provide the Town with thirty (30) days prior written notice of cancellation, change or amendments to coverage to the attention of the Town Infrastructure and Contract Manager.

During the Term of any resulting Agreement, the Proponent shall provide a Certificate of Insurance annually as part of the reporting requirements for Core Services.



3.17 Termination

3.17.1 Termination on Expiry

- a. The agreement will terminate on the expiry of the Current Term or on expiry of an agreed to extension period (under b.) under the following circumstances:
 - (i) The Town gives the Proponent notice it does not intend to renew the agreement; or
 - (ii) The Proponent declines a request to renew by the Town; or
 - (iii) The parties agree to renew but cannot reach agreement on the Fixed Price for the Renewal Term within the time limit set out as required in section 3.6.2.
- b. If any of the conditions in section 3.17.1(a)(i) through (iii) are met, the parties may agree to extend the Current Term by a specified duration of no more than 24 months upon the same terms and conditions as the Current Term.

3.17.2 Early Termination for Cause

During a Current Term, this agreement may be terminated early by either party, if the following conditions are satisfied:

- There has been a material breach of the agreement; and
- The party complaining of the breach has given at least 30 days' written notice of the breach to the other party; and
- The other party does not correct the breach within 30 days, or such other period of time as may be mutually agreed to by the parties in writing.
- If either party disputes the existence of a breach or that the breach is material, then the dispute may be referred to dispute resolution process under Section 3.10

3.18 Entire Agreement

The agreement constitutes the entire and sole agreement between the parties with respect to the subject matter hereof and supersedes all previous negotiations, communications, and other agreements whether written or oral, relating to it, unless they are incorporated by reference in the agreement. There are no terms, covenants, representations, statements, or conditions binding on the parties other than those contained in the agreement. Neither party has relied upon any such prior or contemporaneous communications.

3.19 Governing Law

This agreement will be interpreted and governed, and the relations between the parties determined by the laws in force in the Province of Ontario and the parties irrevocably attorn to the jurisdiction of the courts of the Province of Ontario

3.20 Amendments and Waivers to be in Writing

Amendments to the agreement will be in writing and be executed by the authorized representatives of both parties. If agreed to in writing by both parties an amendment will form a valid and binding part of the agreement. No waiver of any breach of any provision of this agreement will be effective or binding unless it is in writing and signed by the authorized representatives of both parties purporting to give such waiver and, unless otherwise provided, will be limited to the specific breach waived



SCHEDULE A: WATER AND WASTEWATER SYSTEMS AND SERVICES

A1 Introduction

This part of the RFP describes the Town's water and wastewater systems and assets as well as the services to be provided by the contracted Proponent including the water and wastewater processes to be operated, assets to be maintained and protected, and management activities to be performed to deliver water and wastewater services to the Town and its customers to agreed service levels. Whereas the Town retains ownership of its water and wastewater systems assets and accountability for its water and wastewater services, it intends to delegate responsibility for caring for and operating these systems and provision of related services to a qualified third-party provider.

A2 Water and Wastewater Systems Summary Description

A2.1 Purpose of Water Systems and Services

The purpose of the Town's water and wastewater systems and services is to provide agreed service levels and in accordance with all applicable Laws to customers in the Town to ensure the protection of public health and safety, enablement of economic development and protection of the environment.

A2.2 Description of Water System

Water treatment plant rated at 3,000 m³/day (gross maximum daily production) consisting of a dual train package unit, each train rated 1,500 m³/day, consisting of an inline flash mixing tank equipped with mechanical flash mixer, a two stage flocculation tank equipped with variable speed flocculators in each unit, an upflow solids contact clarifier equipped with inclined plate settlers and automatic sludge withdrawal, dual media filters with a maximum surface loading of 8.4 m/hr equipped with water backwash and separate air scour, backwash pumps and air scour compressors with duty and standby units, chemical feed system for primary coagulant, coagulant aid, disinfection and pH correction consisting of chemical storage tanks and metering pumps (duty and standby) for each feed system, instrumentation and monitors including continuous monitoring of water turbidity for raw water and treated water (one per filter unit) and disinfectant residual (equivalent to free chlorine), including structures, standby power, electrical, instrumentation, mechanical, piping and site work.

A dual compartment waste collection system and sludge bagging system for filter backwash water and sludge blow down from the clarifier. Liquid generated from the sludge bags and plant sewage directed to sewage lift station equipped with a duty and a standby pump for pumping waste to the Wastewater Treatment Facility.

Water storage reservoir located beneath the water treatment plant with a usable storage volume of 2,140 m³. High lift pumping station equipped with three (3) 24.7 L/s pumps (two duty and one standby) service pumps and one (1) 155 L/s emergency pumps.

Inlet structure drawing water from Moose River via a submerged flexible buried intake consisting of a set of two (2) inlet screens (with a possibility of a future third unit) set into recessed section of concrete ballasted structure on the river bottom, connected to the raw water pumping station through 60 m of buried 250mm (10 in) diameter pipe.

Raw water low lift pumping station constructed below grade at the edge of the river bank, consisting of



three (3) submersible pumps (two duty and one standby) installed in individual well style easings connected to a common header, each pump rated at 17.4 L/s (1.5 million L/day).

For emergency purposes, a 230 kW diesel generator set is available to provide emergency power to the entire facility in the event of a power outage.

The location of the water plant is as follows:

Water Treatment Facility - located at the southeast corner of Ferguson Road and Butler Creek (Easting 526710m, Northing 5601190m) in the Town of Moosonee.

For more information on the process within the WTP, please refer to the attached Drinking Water Works Permit (DWWP) (Schedule E) and the Municipal Drinking Water License (MDWL) (Schedule D).

The distribution system is a Class I system and consists of various piping.

The system consists of approximately 20 kms. watermain, 674 service connections, 120 fire hydrants. The watermains are constructed mainly of cast iron and polyvinyl chloride (PVC) pipe ranging from 150mm to 300mm.

A2.3 Description of Wastewater System

Facultative Lagoon

Seasonal retention lagoon facility, rated at an average daily flow of 1,466 m³/day, consisting of a two-cell configuration seasonal retention facultative lagoon facility, designed to operate on a fill- and-draw basis, with a usable volume of 165,658 cubic metres per cell, based on a maximum operating depth of 1.8 metres plus an allowance for retention of 0.3 metres of liquid after the seasonal draw down and a freeboard of 0.9 metres.

Each lagoon cell equipped with inlet and outlet control structures; interconnecting pipework to allow maximum flexibility of operation and overflow pipe between cells and constructed of excavated material with internal berm slope of 4:1. There is a outfall pumping station located at the lagoon site, consisting of a 3.0 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 276 L/s discharging to a 300 metre long peatland polishing system located surrounding the lagoon site, with final discharge via Little Nicholas Creek to Moose River;

Sewage Lift Station No. 1

Sewage pumping station located on Ferguson Road near the water treatment plant, consisting of a 2.4 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 9.1 L/s and a 125 mm diameter forcemain discharging to Sewage Lift Station No. 2, including electrical, mechanical and power connection to engine generator at the water treatment plant.

Sewage Lift Station No. 2

Sewage pumping station located at the intersection of Bay Road and Fourth Street, consisting of a 2.4 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 27.7 L/s and a 200 mm diameter forcemain discharging to Sewage Lift Station No. 3, including electrical, mechanical and a standby engine generator;

Sewage Lift Station No. 3

Sewage pumping station located at the intersection of Ferguson Road and Lee Crescent, consisting of a 3.0 m diameter pre-cast concrete wet well equipped with 2) submersible pumps (duty and standby) each rated a 73.5 L/s and a third pump (spare) and a 300 mm diameter forcemain discharging to the Sewage Treatment Lagoon, including electrical, mechanical and a standby engine generator;



Sewage Lift Station No. 4 – No. 9

The remaining lift stations contain two submersible pumps (duty and Standby) rated between 9 L/s and 27 L/s. There is not backup generation for these lift stations.

A3 Water and Wastewater System Services

The services to be provided by the contracted Proponent for the water and wastewater systems on behalf of the Town are described in this section, including:

- **Core Services.** These are the services that are required to be delivered under the Water and Wastewater Services Agreement by the contracted Proponent.
- **Additional services.** These are the services not included in the Core Services that can be delegated to the contracted Proponent at the option of the Town to be governed under the Water and Wastewater Services Agreement using the Additional Services Request process described below.

General Routine Water and Wastewater Systems Services

These services include the labour required for the operation, routine maintenance, and management, including asset protection of the facilities. The description of the services in this RFP is for general purposes only and does not necessarily reflect the entire scope of the services to be provided by the contracted Proponent. Proponents should nevertheless address these general descriptions in their response to this RFP.

Utilities

Utility costs which include telephone, internet, security (electronic alarm system), electricity, natural gas, water, and heating fuels will be the responsibility of the Town and billed directly of the Town.

Chemicals

The supply, ordering and arranging delivery of chemicals shall be the responsibility of the Proponent. The proponent will bill the town for the purchase and delivery of the chemicals.

Vehicle Cost

The cost for transportation includes the use of vehicles to carry out the day-to-day requirements of this Contract, and all costs are the responsibility of the Proponent.

Equipment

Includes, but is not limited to office equipment, laboratory equipment, safety equipment, tools, communication equipment, maintenance equipment, mechanical equipment and manually operated equipment. An inventory of municipally owned equipment is to be provided by the successful Proponent to the Town annually. All equipment purchased under this Contract, remain the property of the Town.

Materials and Supplies

Includes, but is not limited to, office supplies, duplicating and photo supplies, medical supplies, laboratory chemicals, laboratory supplies, cleaning, personal hygiene, janitorial and maintenance supplies and other materials and supplies, are the responsibility of the Proponent.

Third Party Laboratory Analysis



Organized, coordinated, and managed and reviewed by the Proponent. The cost to courier and analyze water and wastewater samples at an accredited laboratory (in accordance with the requirements of the Safe Drinking Water Act), as required by the Safe Drinking Water Act and its regulations and the Environmental Compliance Approval(s) will be billed directly to the Town.

Outside Services

Includes, but is not limited to, equipment rentals, and other professional services will be billed directly to the Town.

Proponent (in addition to above)

- a) Any cost that is required to adhere to the applicable ECA, DWWP and MDWL
- b) Any cost that is required as a result of a Ministry, or other regulatory inspection and order that relates to the responsibilities of the operator.
- c) Postage and freight charges, printing and binding and courier services

Town (in addition to above)

- a) Any cost that is required to comply with new legislation or regulation.
- b) Anything that results in an amendment or replacement of the ECA, DWWP and MDWL
- c) Cost of third-party auditor for DWQMS conformance
- d) Cost for third-party removal and disposal of biosolids.

The Successful Proponent will be responsible for operation of the following facilities:

A3.1 Asset Operations Services (Core Services)

Proponent will provide routine operations, maintenance and management of the water and wastewater systems and staff the systems with certified and skilled operators and maintenance staff, including:

- Comply with all Environmental Compliance Approval(s), Drinking Water Works Permits, Municipal Drinking Water License, Certificate of Approvals and other relevant government acts and regulations.
- Provide an Overall-Responsible-Operator (ORO) / Operator-In-Charge (OIC) to be responsible for the overall operation and management of the water systems (as per O. Reg 128/04 Sections 22 and 23: Certification of Drinking Water System Operators and Water Quality Analysts as amended to 256/05)
- Provide sufficient certified operator(s) to operate the water and wastewater systems as required under normal operating conditions on business days and during business hours to operate and manage the system in compliance with the requirements of applicable Laws and terms of the Agreement.
- Provide certified operator(s) to be on call 24 hours per day, 365 days per year to respond to emergency conditions in respect to the operations of the water and wastewater systems.
- Provide staff for overtime and call-ins to be provided as required.
- Provide training and continuing education to operations staff as required to ensure the continued safe and compliant operation of the treatment system.
- Keep a clean, healthy, and safe work environment.
- Ensure security at sites and buildings by maintaining fences, gates and locks, notifying the Town of any deficiencies.
- Review regulators' inspection deficiency reports, amending deficiencies, as approved by the Town, or negotiating amendments to deficiencies with regulator.
- Monitor and control water and wastewater systems, assets and processes using the Town's Supervisory Control and Data Acquisition (SCADA) system and other control devices and



instrumentation, and/or the contracted Proponent's own SCADA system, including tuning control loops, analyzing key process parameters to identify trends, optimizing performance, and anticipating potential non-compliance events before they occur.

- Record, track and analyze key process parameters and resources consumed, including flows, energy usage (electricity and gas), chemical usage.
- Maintain daily on-site log sheets (electronic logbooks preferred) as well as operating records, including process control log sheets, sampling and laboratory log sheets and routine check lists as required by applicable Laws and as considered to be good industry practice.
- Monitor and report any significant water loss based on parameters such as flows, pressures, and elevated tank levels.
- Monitor and respond to alarms, including making any adjustments or corrections necessary to fix the cause of the alarm condition.
- Perform source/discharge, treatment, and distribution sampling for processing, including collection, preservation, packing, shipping, and tracking for off-site laboratory processing.
- Coordinate supplies of chemicals and materials with vendors
- Clean, lubricate, adjust, inspect, and perform minor repair of water and wastewater system assets.
- Clean, calibrate and verify all meters and equipment in accordance with the system license requirements and to ensure reliable accuracy (e.g., flow meters, backflow preventers, hoist)
- Maintain any tools and equipment used to deliver the services.
- Maintain any vehicles used to deliver the services.
- Produce reports as specified in Section A3.10 below.

A3.2 Asset Distribution and Collection Services (Core Services)

Proponent will:

- Regular checks of pumping stations and force mains to ensure proper operation and to record meter readings.
- Regular checks of water tower operation
- Keep hydrants operable and compliant, including flushing, opening, exercising, and winterizing.
- Keep main distribution shut-off valves operational by exercising.
- Annual exercising of distribution valve
- Perform water shutoff/ opening as requested by the Town.
- Fire hydrant flushing (twice per year), winterization and painting (every three years)
- Annual maintenance hole inspection for infiltration, damage, and general condition.

A3.3 Asset Maintenance Services (Core Services)

The Proponent shall provide the Town with full documentation validating that the appropriate maintenance procedures are being performed on all Town owned equipment in accordance with manufacturers' recommendations and best practices.

The Proponent must monitor and enforce all equipment warranties and perform all activities in accordance with manufacturer recommendations to preserve such warranties both those in effect on the date of the execution of the Water and Wastewater Services Agreement and those for new equipment purchased during the term of the Water and Wastewater Services Agreement.

Notwithstanding the above time frame, the Proponent will perform all the necessary maintenance at the facilities as per regulations or established industry standards and best practices from the effective date of the Services Agreement.



Maintenance categories are as follows:

Routine Maintenance

Maintenance and care of all facilities including all cleaning/janitorial, equipment adjustments, lubrication, repairs, and painting to preserve the condition and appearance of all facilities.

Preventive Maintenance

Regularly scheduled and follow-up maintenance activities, as recommended by equipment manufacturers or using best practices, including routine inspections, warranty maintenance activities, calibration, and testing of emergency standby generators.

Routine and preventive maintenance labour costs are the Proponent's responsibility while the cost of services, materials, supplies, and replacement parts including lubricants, filters, belts and all other consumable materials (procured by Proponent) will be billed quarterly (without mark-up) to the Town.

Breakdown Maintenance

Breakdown maintenance is defined as repair, replacement or renewal of equipment or other capital items that have failed or when failure is deemed to be imminent.

The Proponent shall submit an Expenditure Request to the Town for all breakdown maintenance items in advance of conducting any work to ensure such maintenance is properly approved. If delay in any such repair, replacement or renewal of equipment would immediately compromise the applicable ECA, DWWP or MDWL, the Public Works Manager must be consulted prior to any work being performed and an Expenditure Request must be submitted within seventy-two (72) hours of approved repairs being completed.

Where applicable, costs for repairs and/or parts and materials by competitive quotations will be obtained by the Proponent and provided to the Town prior to consultation and approval, in coordination with Town procurement bylaw.

A3.4 Non-Routine (Major) Repairs, Rehabilitation and Replacement of Assets Services Supervisory Services (Core Services)

Proponent will **provide coordination** and **supervisory support** for planned non-routine maintenance projects and initiatives for water and wastewater system assets (i.e., major repairs, rehabilitation, and replacement)

The Proponent will also **provide coordination** and **supervisory support** for unplanned non-routine maintenance (major) repairs, rehabilitation, and replacement projects (i.e., unplanned non-routing maintenance) as approved by the Town via the Additional Services process as part of Core Services.

Note: The planned and un-planned non-routine maintenance project activities (and associated costs) are considered to be Additional Services.



A3.5 Asset Planning Services (Core Services)

Proponent will:

- Provide recommendations for major repairs, rehabilitation replacement and new infrastructure assets not considered to be part of routine maintenance with a business case on an annual basis to be considered by the Town for approval and inclusion in the Town's Capital Program and support its annual budgeting process.

A3.6 Asset Design, Construction & Commissioning Services (Core Services)

Proponent will, referring to the Town's approved Capital Program for currently planned infrastructure projects:

- Review infrastructure asset designs from an operations and maintenance perspective as required. This includes identifying the impact of any new infrastructure on existing assets and systems and the operability and maintainability of that new infrastructure.
- Support the commissioning of any new infrastructure assets, including verifying that the new asset or group of assets complies with functional and technical design specifications from an operations and maintenance perspective, confirming operability and maintainability and identifying the impact on the existing operations and maintenance.

A3.7 Asset and Process Optimization Service (Core Services)

The Proponent will provide recommendations for any asset and process optimization services that improve water or wastewater process or system efficiency, effectiveness, and performance, improve service levels to customers, or lower risks which are not included or considered to be routine operations or maintenance. The Proponent will submit a business case annually showing the costs and benefits for each recommended service to be approved by the Town. Examples of these services include:

- **Process Modelling & Optimization**, it can include detailed pumping system optimization analyses, demand management, energy management and detailed process and process control strategy improvements.
- **Asset Modelling and Optimization**, intended to optimize the life of critical assets. It includes applying predictive analytics/models to analyze the condition and performance history of major assets (e.g., pumps, chemical dosing equipment) This may require detailed assessment of equipment condition using advanced techniques (e.g., infrared thermography, vibration analysis). Results would be used in conjunction with the Asset Management and Capital Plans
- **Energy Optimization**, intended to better understand, manage, optimize, and report on the energy usage and related greenhouse gas emissions of the Town's Water and Wastewater Systems
- Other services as proposed by the Proponent.

A3.8 Management Services (Core Services)



The Proponent will provide management services to support the delivery of its operations and maintenance services to the Town. These services include the management, administrative and relationship support services required to enable the efficient and effective delivery of water and wastewater system services to the agreed service levels. Management services are assumed to be included as part of the service offering of any operations, maintenance and management services contractor applying good industry practice. As such, they are assumed to be part of the Core Services.

Proponent will provide management, leadership, and administrative services as required to support the services in the Agreement. This will include:

- Conduct business planning in alignment with Town priorities.
- Provide leadership to staff.
- Perform operational and trend analyses.
- Maintain the Drinking Water Quality Management System up to date.
- Monitor and report on service performance.
- Review and refine service performance measures and targets.
- Perform water and wastewater system-wide operational risk management.
- Provide coordinated access and supervision to third party contractors who work on the water and wastewater systems to ensure that work is performed in an efficient and effective manner.
- Perform administrative tasks as required by the Water and Wastewater Services Agreement
- Administer the agreement with the Town.
- Perform all financial and accounting activities using generally accepted accounting principles (GAAP) to support the financial management requirements under the agreement, including:
 - Planning, budgeting, and forecasting
 - Reporting of costs
- Provide procurement services as necessary to support the agreement, including:
 - Order and receive materials and supplies.
 - Order and receive chemicals and organize deliveries.
 - Contract with third-party service providers to deliver subcontracted services to the Town under the agreement (e.g., contractors, consultants)
 - Adhere/align to the Town's procurement policy as a minimum standard.
- Provide HR planning, hiring, staffing, payroll, benefits, and other HR services required to provide the services, deliver site specific training to staff operators and technicians, and plan and deliver staff CEUs and health & safety training.
- Plan, schedule, and manage all work and resources required under the agreement, including:
 - Prioritize, assign resources/crews, schedule on-call.
 - Manage statutory holidays, vacations and time-off.
 - Coordinate with third parties (e.g., contractors, suppliers) who require site access to perform work on the systems.
 - Provide contractor orientation and health and safety instructions.
- Review and update Standard Operating Procedures as required, including:
 - Operating manuals and procedures
 - Maintenance manuals and procedures / job plans for asset maintenance and care.
- Regularly update the Water System Emergency plan as required under the DWQMS and in alignment with the Town's municipal Emergency Plans that includes procedures for managing Emergencies and other Uncontrollable Circumstances affecting the systems, assets and services (update at the same frequency as the Town's Plan)
- Complete and submit 100% of reports as per Section A3.10 below.
- Maintain and manage the inventory in coordination with the Town.
- Provide information management services, including:
 - Manage access and physical security for Town facilities (e.g., ID cards, locks, keys)



- Manage Proponent staff mobile devices.
- Ensure IT security, integrity, and related activities (e.g., back-ups and recovery)
- Collect, store, maintain, and make securely available complete and accurate data required to support the agreement, including data on:
 - Operations, maintenance, and management
 - Assets covered under the agreement.
 - Work performed (e.g., operations work, maintenance work)
 - Water and wastewater process and system performance
 - Compliance
 - Staff training (e.g., health and safety, environmental compliance, operator certification) – track testing and certification levels
 - Integrate data wherever possible to improve the efficiency of reporting (e.g., lab data from external sources into compliance and performance reports)
- Meet and communicate with the Town to maintain a good working partnership between the parties, including:
 - Meet with the Town on a frequency agreed to by the parties.
 - Provide the Town with the reports and updates specified in the agreement.
 - Be responsive to the Town's requests.
 - Promptly advise the Town of any incidents, non-compliance events, or information which could have a material bearing on the provision of the services by the Proponent.
- Provide all stakeholder relations and communication services necessary to support the requirements under the Agreement, including:
 - Attending the phone
 - Communicating and meeting with Town representatives
 - Processing internal, and client emails
 - Communicating with government agencies (e.g., Province of Ontario Ministries)
- Support the engagement of community stakeholders (e.g., by providing facility tours, making classroom appearances)
- Provide and maintain insurance as per the agreement, including for the contracted Proponent:
 - Workers' compensation insurance
 - All risk property insurance for the contracted Proponent's property
 - Comprehensive general liability insurance
 - Proponent's pollution insurance
 - Automobile liability for vehicles owned/leased by the contracted Proponent.
- Meet the water quality and environmental compliance obligations under all applicable Laws, including:
 - Conducting and reporting on water quality and environmental compliance related observations, inspections, audits (e.g., MECP/MOL inspections, internal audits, external audits)
 - Taking remedial action

Note: Proponent will notify the Town of a need to obtain, amend or extend regulatory approval and support the Town in the process.

- Meet the health & safety compliance obligations under all applicable Laws (e.g., *Occupational Health and Safety Act, 1990*), *Workers' Compensation Act, 1990*, *Workplace Safety and Insurance Act, 1997*), including:
 - Conducting and reporting on health & safety related observations, inspections, audits (e.g., worksite audits) and taking remedial actions
 - Observing and reporting near misses and incidents and taking remedial actions
 - Holding incident review meetings (monthly)



A3.9 Water Customer Services (Core Services)

- Provide and participate in community engagement events (e.g., site visits, tours, classroom visits) with community stakeholders.

A3.10 Reporting and Information Submissions (Core Services)

The Proponent will deliver the reports and information to the Town as described below. At a minimum this will include all regulatory reports required by government regulators (e.g., MECP, MOL) under applicable Laws in addition to those requested by the Town.

Where possible:

- Reports should use operations and maintenance data extracted directly from Information and technology systems in addition to manually recorded data.
- Data and information should be presented in tables and graphs that show trends over time and monitor performance against the targets agreed to in the service level expectation.

Business Performance Reports

The Proponent will deliver business performance reports to the Town. The business performance reports will include:

- Annual confirmation of the subsequent year's key deliverables, outcomes, and milestones.
 - Key service level results, programs and initiatives, any associated deliverables, results against specific performance measures and targets

Core Services Performance Reports

The Proponent will provide reports on the core services performance on a quarterly and annual basis. The reports will focus on the Core Services delivered under this agreement, including core operations services, and core maintenance service.

- Routine operations services for water sources/discharge, treatment, distribution, and collection performance, including:
 - Month over month trends of physical, chemical and biological parameters related to water quality and compliance for raw, treated and distributed water (e.g., flows, pressures, turbidity, TDS, Ca, Mg, hardness, Na, TOC, Al, Cu, Pb)
 - Non-compliance events/incidents/accidents
 - Service interruptions and time to restore service.
 - Compliance samples / other samples taken.
 - Audits and inspections conducted (internal, external, regulator) investigations conducted.
 - Compliance reports submitted.
 - Licenses and Approvals updated, submitted.
 - Employee training held.
 - Health & safety meetings conducted.
 - Electricity usage per volume treated.
 - Chemical usage per volume treated



- Routine maintenance services of water source, treatment, distribution and collection maintenance, including: *utilize the town asset management software – keep system assets up to date, including addition of financial information (e.g historical costs, operating costs, replacement costs etc.)
 - New assets added to the asset register, adjustments in maintenance strategies (e.g., from time-based to condition- based)
 - Work order cycle time (work order completion rates)
 - Mix of corrective/preventive/predictive maintenance
 - Additional work scheduled and tracked using the CMMS / WMS (e.g., sampling rounds)
 - Average age and remaining life in years of key asset groups in Water Systems (e.g., water mains, water valves, pumps) – only reported annually.
 - Note: add new performance targets after program is established and running (e.g., after Year 1 or 2)

Submissions to the Town:

- Performance update (on Core Services): Quarterly
- Performance report (on Core Services): Annually by end of February for previous year

Non-Routine (Major) Maintenance Plan and Progress Performance Reports

The Proponent will deliver quarterly and annual Non-Routine Maintenance Reports describing the progress of approved non-routine maintenance services as well as approved un-planned non-routine maintenance undertaken by the contracted Proponent.

Submissions to the Town:

- Non-Routine Maintenance Update: Quarterly
- Non-Routine Maintenance Report for previous year: Annually by end of February

Regulatory Reports

The Proponent will deliver all regulatory reports required in the role of accredited Operating Authority for the drinking water systems as reflected in all applicable Laws. This includes the following:

- Safe Drinking Water Act, 2002, S.O. 2002, c. 32, s. 21 – Quality Management (Standard) System (as per the Drinking Water Quality Management Standard requirements)
- O. Reg 170/03 – Section 11 Annual Reports and Schedule 22 – Summary Reports

Event Notification and Reporting

The Proponent will promptly notify the Town (and Regulator as required) of the following events:

- Compliance violations / non-compliance events
- Treatment system has gone out of compliance with regulatory requirements.
- Water quality or environmental incidents
- Health and safety accidents



- Changes in applicable Laws (e.g., legislation, regulations) that impact the systems and services. Any modifications to the treatment, distribution or collection services or systems required to comply with any change in laws, upon which the Town will provide approval, if reasonable, to make the required modifications or changes
- Information technology event such as a breach of security or data as soon as it is discovered, along with remediation plans and strategies.

A4 Service Levels

This section describes the general and specific service levels to which the Proponent will be expected to deliver the services. It also describes the Town's need to continue to improve delivery of water and wastewater services through the term of the Water and Wastewater Services Agreement in alignment with Town priorities and the trends and influences that will impact the Town as well as its water and wastewater services in the future.

A4.1 General Service Performance Standards

- Comply with all applicable Laws including approvals.
- Employ good industry practices.
- Keep the assets in a state-of-good-repair.
- Exercise good communication

A4.2 Good Industry Practice

The Proponent will consider good industry practice as the foundation of ongoing service and process improvement in alignment with the principles of the Town's QMS and DWQMS. The following practices were used as a basis for the recent Service Delivery Review and will continue to be the basis for measuring contracted Proponent performance:

- Services and operations are well-defined, planned and strategically managed.
- Costs are competitive, allocated and fully recovered through rates, fees, and charges.
- Operational workforce is experienced, focused and flexible.
- Water system assets are planned for the full life cycle and cared for and protected to optimize their service life.
- Technology solutions are essential for compliance, efficiency, and effectiveness.
- Organizational health is a long-term strategic commitment.
- Performance is managed for continuous improvement.

A4.3 Specific Performance Measures

Key performance measures are provided below. The initial targets will be agreed to during final negotiations with the successful Proponent. The targets will be reviewed and may be adjusted every year as part of the annual performance reporting process.

Public Health, Water Quality and Environmental Compliance

- # of water quality compliance exceedances/yr.
- MECP inspection results



- # of water compliance samples taken, tested and analyzed
- Volumes of spills to the environment

Asset Health

- Amount of Corrective, Preventive and Predictive Maintenance performed (%)
 - Corrective / Reactive Maintenance
 - Planned / Preventive Maintenance
 - Predictive Maintenance

Client Care

- % of required reports delivered on time to the Town by the contracted Proponent (% on time)
- Time to respond to an alarm
- # of water quality complaints from customers per year (e.g., due to colour, taste and/or odour)
- # of community engagement events (facility tours, make classroom appearances, attend events)

Health and Well Being

- # of lost time incidents/year
- # of hours of training/employee/year
- # of health & safety planning meetings/year

Proponent can provide any additional specific performance measures that contribute to the Town's water and wastewater services outcomes.

A4.4 Water and Wastewater System Resource Consumption

The main consumable resources required to operate and maintain the water and wastewater systems and asset are electricity and chemicals. It is assumed that the Proponent will make every effort to minimize the use of these resources by employing operations and control strategies that reduce the total electricity and chemicals used.

It is also assumed that if the Town's electricity provider offers time-of-day pricing options, the Proponent will use available process flexibility (e.g., manage storage in tanks or reservoirs) to shift power loads from on-peak time periods to off-peak time periods to ensure minimum overall electricity cost to the Town.

The Proponent will monitor and report on the amount of chemicals used per volume of water/wastewater treated to ensure the processes are operating as efficiently as possible (e.g., chlorine for disinfection).

A4.5 Continuous Performance Improvement

The Proponent will submit a report on continuous performance improvement. This report will identify and schedule the following areas for improvement:

- Improve strategic business planning.
- Reduce manual and paper-intensive procedures and activities where possible.



- Use good industry practice-based maintenance to:
 - a. Identify essential equipment based on criticality and consequence of failure, and improving the application of asset condition sensors to monitor, trend and predict essential equipment and process failures for that equipment.
 - b. Achieve the optimum ratio between corrective (CM), preventive (PM) and predictive (PdM) maintenance.
 - c. Adjust preventive maintenance strategies over time from mostly time-based towards more condition and criticality- based maintenance to ensure unnecessary maintenance work is eliminated.
- Further leverage the capabilities of the Town SCADA System and/or supplement with Proponent SCADA system to:
 - a. Enable remote monitoring and control to minimize the need to attend the facilities outside typical working hours
 - b. Improve control strategies to reduce the use of chemicals and electricity (e.g., pump optimization)
 - c. Identify energy intensive equipment and implement improvement opportunities.
- Increase use of technology tools for operators and mechanics to reduce manual work and reduce redundant data entry. This should include tools such as:
 - a. Handheld mobile solutions to enable mobile work and maintenance management, electronic logbooks, and integrated compliance reporting software.

A5 Water and Wastewater System Assets

The water and wastewater systems and related assets owned by the Town and through which the services are to be delivered under the Agreement include:

A5.1 Water and Wastewater System Infrastructure Assets

- Civil, mechanical, electrical, instrumentation assets and process equipment (e.g., equipment such as pumping systems, valves, chemical feed systems)
- Building and site assets (e.g., buildings, grounds, parking lots, access roads, fences)

A5.2 Enabling Assets

The following enabling assets will be agreed at the start of the Water and Wastewater Services Agreement based on an inventory review with the Proponent:

- Parts and equipment (e.g., flow monitoring equipment, process laboratory equipment, emergency generators, emergency radios & headsets)
- Information, technology and telecommunications hardware, equipment, software
- Consumables and supplies (e.g., treatment chemicals, lab chemicals, cleaning supplies)
- Furniture and fixtures (e.g., desks, chairs at water treatment facilities)



A6 Additional Services

Additional Services are the services under the Water and Wastewater Services Agreement for which responsibility has been delegated to the Proponent by the Town in addition to Core Services. These Additional Services will be initiated and defined using the Town's Service Request, Quotation and Approval processes.

A6.1 Additional Services Request Process – General

The process for assigning any Additional Services for the water and wastewater systems to the Proponent will be done through a **Service Request** as follows:

1. Town:
 - a. Completes a service request form that includes description of project, scope of services and schedule.
2. Proponent:
 - a. Reviews the proposed additional services requested, estimates the fees (i.e., Proponent costs to be estimated on a Time and Materials basis according to Part B - Pricing Submission)
 - b. Obtains quotes from subcontractors, suppliers, or vendors, and if necessary, adds those quotes to the estimate of Proponent's time and materials costs, attaches those quotes to the service request.
 - c. Discusses any additional clarifying information with the Town.
 - d. Signs and submits the quotation to the Town.
3. Town
 - a. Reviews and approves the proposed Additional Service and quotation.
 - b. Files the copy of the approved service request
4. Proponent
 - a. Delivers the Additional Services as described in the service request as amended.
 - b. Invoices the Town for the Additional Service



SCHEDULE B: INSURANCE REQUIREMENTS

A summary of the insurance coverage that the Proponent will provide throughout the Initial Term of the Water and Wastewater Services Agreement and any Renewal Term in respect of the water and wastewater services, systems and related assets is described below:

• **Workers' Compensation Insurance**

Workers' Compensation Insurance as required under applicable Law.

• **Comprehensive Boiler & Machinery Insurance**

Comprehensive boiler and machinery insurance in the name of the Proponent insuring the Equipment and related assets used to deliver the Services, including:

- The cost of breakdown, maintenance, repair, rehabilitation, and replacement thereof.

The policy shall:

- Name the Town as a beneficiary.
- Contain a waiver of subrogation to the benefit of the Town and its employees.
- Have a coverage limit typical for Comprehensive Boiler & Machinery Insurance.
- Have a deductible limit not greater than Ten Thousand (\$10,000) Dollars per occurrence.

• **Commercial General Liability Insurance**

Commercial General Liability Insurance in the name of the Proponent insuring the liabilities arising out of bodily injury, death, or property damage, including loss of use, occurring on, in or about the assets and systems used in the delivery of the Water and Wastewater Services Agreement, including:

- Contractual liability (including contractual liability with the Town) for sudden and accidental pollution arising from the negligence of the Proponent.
- Cross liability extensions

The policy shall:

- Name the Town as an additional assured, but only in respect of legal liabilities related to the water and wastewater services delivered by the Proponent.
- Contain a waiver of subrogation to the benefit of the Town and its employees.
- Have a coverage limit not less than Five Million (\$5,000,000) Dollars per occurrence.



• **Pollution Liability Insurance**

Pollution liability Insurance in the name of the Proponent insuring pollution events for which the Proponent is legally liable, including:

- Events caused by the Proponent that result in bodily injury and/or property damage.
- Events caused by the Proponent that require remediation activities.

The policy shall:

- Have a coverage limit not less than Five Million (\$5,000,000) Dollars per claim.

• **Professional Liability Insurance**

Professional liability insurance in the name of the Proponent insuring the errors and omissions committed in the course of delivering the water and wastewater services.

The policy shall:

- Have a coverage limit not less than Five Million (\$5,000,000) Dollars per claim.

• **Automobile Liability Insurance**

Automobile liability insurance in the name of the Proponent insuring all vehicles owned and registered or leased in the name of the Proponent used to deliver the water and wastewater services.

The policy shall:

- Have a coverage limit not less than Two Million (\$2,000,000) Dollars combined limit.



SCHEDULE C: PROCUREMENT OF GOODS AND SERVICES

Corporation of the Town of Moosonee

BY-LAW No. 24-11

*Being a by-law to ensure co-ordination,
control and uniformity of procedure in
municipal acquisition of goods and
services, and the disposition
of surplus assets.
(repealing By-Law #39-10)*

WHEREAS the Municipal Act 2001, S.O. 2001, c. 25, Part VI, Section 271 stipulates that municipalities and local boards shall adopt policies with respect to their acquisition of goods and services;

AND WHEREAS The Corporation of the Town of Moosonee has hereby undertaken a comprehensive review of its purchasing processes to identify accountability, transparency, and efficiency improvements;

AND WHEREAS the Council of The Corporation of the Town of Moosonee deems it desirable to repeal, in its entirety, By-Law #39-10, and pass a new by-law with respect to the acquisition of goods and services, and the disposition of surplus goods;

NOW THEREFORE the Council of The Corporation of the Town of Moosonee ENACTS as follows:

SECTION 1 - DEFINITIONS

1. In this by law, the following terms shall have the meanings indicated:

- a) "Acquisition" means the acquisition by purchase, lease, rental or exchange transaction of Goods and/ or Services.
- b) "Applicable Law" means any applicable federal, provincial or municipal law, statutes, by laws, regulations, rules, lawful orders or lawful directives applicable in Ontario from time to time.
- c) "CAO" means the Chief Administrative Officer of the Town and any person to whom the authority of the CAO is subsequently delegated by Council and includes any person who has been authorized, in writing, to temporarily act as CAO during absence or vacancy in that office.
- d) "Clerk-Treasurer" means the Clerk-Treasurer of the Town and any person to whom the authority of the Clerk-Treasurer is subsequently delegated by Council and includes any person who has been authorized, in writing, to temporarily act as Clerk-Treasurer during absence or vacancy in that office.
- e) "Council" means the council of the Corporation of the Town of Moosonee.
- f) "Department" ("Departmental") means an organizational unit of the Town headed by a Manager.
- g) "Manager" means the Manager appointed by Council with administrative responsibility for a Department and includes any person who has been authorized, in writing, to temporarily act during absence or vacancy in that office.
- h) "Emergency" means a situation where it has been determined that a threat to public health, or life, or property or the environment exists such that the immediate Acquisition of Goods and/ or Services is essential to prevent serious delays, or damage to persons or property, or to restore or maintain essential Town services.
- i) "Goods" means goods of all kinds, including both tangible and intangible goods, and shall include supplies, materials, equipment, structures and fixtures to be delivered, installed and/ or constructed, and licenses.
- j) "Single/Sole Source" means an Acquisition permitted under the distinct and unique circumstances
- k) "Services" means services of all kinds, including labour, construction, maintenance and professional and consulting services.
- l) "Town" means The Corporation of the Town of Moosonee.

SECTION 2 - MONETARY REFERENCES

1. All references to dollar amounts in this by-law are to Canadian dollars.
2. All references to dollar amounts in this by-law do not include applicable taxes and/or shipping/freight.

SECTION 3 – APPLICABILITY

1. The provisions of this by-law shall apply to all Acquisitions of Goods and/or Services undertaken by or on behalf of Departments, excluding but not limited to:
 - (a) real estate;
 - (b) consulting or professional services that are delivered in a manner which constitutes an employer/employee relationship, in accordance with Town policies and procedures as amended from time to time;
 - (c) Acquisitions related to reimbursable expenses incurred by employees or elected officials in accordance with Town policies and procedures as amended from time to time;
2. No Commitment shall be entered into, no debt shall be incurred, no expenditure shall be made and no account shall be paid in respect of a commitment for Goods and/ or Services except in accordance with the provisions of this by-law.
3. Town Acquisitions shall be conducted in accordance with this By-Law and Town policies.
4. Delegation of responsibility under this by-law shall only occur as specifically provided.

SECTION 4 - CONFLICTS OF INTEREST

1. Elected officials shall comply with the Municipal Conflict of Interest Act and officers and employees of the Town shall comply with Town policies on conflict of interest.
2. At any time during an Acquisition, no person shall accept, directly or indirectly, from any person or organization to which any Acquisition is, or might be awarded, any thing of any value including rebates, gifts, meals, money or special privileges.
3. No preference will be given to providers or suppliers who provide unsolicited products or samples to the Town or who demonstrate the operation of such products or samples.
4. With respect to the disposal of surplus items, no Town employee or member of such employee's family may acquire an item if the employee was responsible for declaring the item surplus to the Town's needs; or is or was otherwise involved in the disposal of such items.

SECTION 5 - TOWN OF MOOSONEE'S PURCHASING PRINCIPLES

The Town of Moosonee's purchasing principles are:

1. Acquisition processes shall be efficient, effective, objective, and accountable;
2. Transparency and fairness shall be ensured, and competitive value maximized, through full and open procurement processes;
3. The Acquisition of Goods and Services shall be conducted in an unbiased way not influenced by personal preferences, prejudices or interpretations;
4. Acquisition processes and approvals of Awards shall not be conducted by the same individual and, at all times the Clerk-Treasurer shall ensure segregation of process and Award Functions;
5. The total cost of purchasing, maintenance, continuing support, repair, staff training, operation, disposal, and other related costs shall be considered, rather than only the lowest invoice price;
6. The Acquisition of Goods and Services shall be conducted in a manner which will promote, and incorporate whenever possible, the requirements of the Accessibility for Ontarians with Disabilities Act, 2005.
7. The Acquisition of Goods and Services shall be conducted in accordance with the requirements of the Municipal Freedom of Information and Protection of Privacy Act, the Municipal Act, 2001, Business Discrimination Act, as may be applicable;
8. The Acquisition of Goods and Services shall be conducted in compliance with international/interprovincial trade treaties or agreements, as applicable, including the North American Free Trade Agreement, the Agreement on the Opening of Public Acquisition for Ontario and Quebec and the Agreement on Internal Trade.

SECTION 6 - FUNDING AND COMMITMENTS

1. No Commitment shall be entered into in respect of an Acquisition unless:
 - a) funding for the Acquisition has been authorized by Council in the Department's operating or capital budget; or
 - b) special funding for the Acquisition has been approved by Council; or
 - c) the Commitment is made conditional upon funding approval by Council.
2. Where Acquisitions are contingent upon funding from external parties, the funding arrangement shall be verified, in writing, prior to any Acquisition process being undertaken.
3. The Departmental staff responsible for the Acquisition shall ensure that no Goods or Services are ordered, requested, delivered or performed until after a commitment is executed in accordance with this by-law.
4. Commitments having a term in excess of ten (10) years shall require the approval of Council.

SECTION 7 - ACQUISITIONS

1. The acquiring Department shall, prior to initiating any Acquisition process for Goods and/ or Services:
 - a) ensure that the Goods and/ or Services are legitimately required for Town purposes; and
 - b) consider short and long-term requirements with respect to quantities and time lines, or total project cost considering the life span of the program; and
 - c) consider the cost of ongoing maintenance, support, and licensing etc. requirements; and
 - d) confirm availability of funding; and
 - e) allow sufficient time to complete the Acquisition as may be stipulated by Town policy or directive, as amended from time to time.
2. The Manager, in respect of Acquisitions under \$3,000, shall initiate purchases by way of signed Purchase Order.
3. The Manager, in respect of Acquisitions over \$3,000 and up to \$10,000, shall obtain three quotes (wherever feasible), and present the quotations, along with the recommended item(s) detailed on a Purchase Order, to the CAO for final approval and sign off.
4. The Manager, in respect of Acquisitions over \$10,000, shall obtain three quotes (wherever feasible), and present the quotations, along with Management Report to the CAO for Council's consideration and approval by way of Resolution.
5. The Clerk-Treasurer shall be responsible for directing and overseeing all Municipal Acquisition processes.

SECTION 8 - DISPOSITION OF SURPLUS ASSETS

1. Departmental staff may recommend that items including material, equipment, furnishings and vehicles owned by the Town are surplus to the Town's needs and have a cash value or are refuse items.
2. The Manager of the Departmental operating area may declare such items to be surplus and shall then advise the Clerk-Treasurer of any items including materials, equipment, furnishings and vehicles owned by the Town which in his or her opinion are surplus and have a cash value.
3. Items declared surplus and having a cash value may be disposed of by the Clerk-Treasurer by the most advantageous means, which may include:
 - a) redistribution throughout the Town; or
 - b) a recognized charitable organization in Moosonee registered as such with the Canada Revenue Agency (Charities Directorate); or
 - c) public bid; or
 - d) trade in at fair market value as part of the Acquisition of other similar items or items required by the Town; or
 - e) as Council may otherwise authorize.



SCHEDULE D: MUNICIPAL DRINKING WATER LICENCE



MUNICIPAL DRINKING WATER LICENCE

Licence Number: 232-101

Issue Number: 7

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this municipal drinking water licence under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

The Corporation of the Town of Moosonee

**5 First Street
P.O. Box 727
Moosonee ON, P0L 1Y0**

For the following municipal residential drinking water system:

Moosonee Drinking Water System

This municipal drinking water licence includes the following:

Schedule	Description
Schedule A	Drinking Water System Information
Schedule B	General Conditions
Schedule C	System-Specific Conditions
Schedule D	Conditions for Relief from Regulatory Requirements
Schedule E	Pathogen Log Removal/Inactivation Credits

Upon the effective date of this drinking water licence # 232-101, all previously issued versions of licence # 232-101 are revoked and replaced by this licence.

DATED at TORONTO this 23rd day of March, 2022

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Information

System Owner	The Corporation of the Town of Moosonee
Licence Number	232-101
Drinking Water System Name	Moosonee Drinking Water System
Licence Effective Date	March 23, 2022

1.0 Licence Information

Licence Issue Date	March 23, 2022
Licence Effective Date	March 23, 2022
Licence Expiry Date	March 23, 2027
Application for Licence Renewal Date	September 23, 2026

2.0 Incorporated Documents

The following documents are applicable to the above drinking water system and form part of this licence:

2.1 Drinking Water Works Permit

Drinking Water System Name	Permit Number	Issue Date
Moosonee Drinking Water System	232-201	March 23, 2022

2.2 Permits to Take Water

Water Taking Location	Permit Number	Issue Date
Moose River	0141-BNEJTH	April 20, 2020

2.3 Other Documents

Document Title	Version Number	Version Date

3.0 Financial Plans

The Financial Plan Number for the Financial Plan required to be developed for this drinking water system in accordance with O. Reg. 453/07 shall be:	232-301
Alternately, if one Financial Plan is developed for all drinking water systems owned by the owner, the Financial Plan Number shall be:	232-301A

4.0 Accredited Operating Authority

Drinking Water System or Operational Subsystems	Accredited Operating Authority	Operational Plan No.	Operating Authority No.
Moosonee Water Treatment Plant	Veolia Water Canada Inc.	232-401	232-OA1

Schedule B: General Conditions

System Owner	The Corporation of the Town of Moosonee
Licence Number	232-101
Drinking Water System Name	Moosonee Drinking Water System
Licence Effective Date	March 23, 2022

1.0 Definitions

1.1 Words and phrases not defined in this licence and the associated drinking water works permit shall be given the same meaning as those set out in the SDWA and any regulations made in accordance with that act, unless the context requires otherwise.

1.2 In this licence and the associated drinking water works permit:

“adverse effect”, **“contaminant”** and **“natural environment”** shall have the same meanings as in the EPA;

“alteration” may include the following in respect of this drinking water system:

- (a) An addition to the system,
- (b) A modification of the system,
- (c) A replacement of part of the system, and
- (d) An extension of the system;

“compound of concern” means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged to the air from a component of the drinking water system in an amount that is not negligible;

“CT” means the CT Disinfection Concept, as described in subsection 3.1.1 of the Ministry’s Procedure for Disinfection of Drinking Water in Ontario, dated July 29 2016.

“Director” means a Director appointed pursuant to section 6 of the SDWA for the purposes of Part V of the SDWA;

“drinking water works permit” means the drinking water works permit for the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“emission summary table” means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05;

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

“financial plan” means the financial plan required by O. Reg. 453/07;

“Harmful Algal Bloom (HAB)” means an overgrowth of aquatic algal bacteria that produce or have the potential to produce toxins in the surrounding water, when the algal cells are damaged or die. Such bacteria are harmful to people and animals and include microcystins produced by cyanobacterial blooms.

“licence” means this municipal drinking water licence for the municipal drinking water system identified in Schedule A of this licence;

“Ministry” means the Ontario Ministry of the Environment, Conservation and Parks;

“operational plan” means an operational plan developed in accordance with the Director’s Directions – Minimum Requirements for Operational Plans made under the authority of subsection 15(1) of the SDWA;

“owner” means the owner of the drinking water system as identified in Schedule A of this licence;

“OWRA” means the *Ontario Water Resources Act*, R.S.O. 1990, c. 0.40;

“permit to take water” means the permit to take water that is associated with the taking of water for purposes of the operation of the drinking water system, as identified in Schedule A of this licence and as amended from time to time;

“point of impingement” has the same meaning as in section 2 of O. Reg. 419/05 under the EPA;

“point of impingement limit” means the appropriate standard from Schedule 2 or 3 of O. Reg. 419/05 under the EPA and if a standard is not provided for a compound of concern, the concentration set out for the compound of concern in the document titled “Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants”, as amended from time to time and published by the Ministry and available on a government of Ontario website;

“licensed engineering practitioner” means a person who holds a licence, limited licence or temporary licence under the Professional Engineers Act;

“provincial officer” means a provincial officer designated pursuant to section 8 of the SDWA;

“publication NPC-300” means the Ministry publication titled “Environmental Noise Guideline: Stationary and Transportation Sources – Approval and Planning” dated August 2013, as amended;

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

“SDWA” means the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32;

“sensitive receptor” means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from a discharge to air from an emergency generator that is a component of the drinking water system, including one or a combination of:

- (a) private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.),
- (b) institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.),
- (c) outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.), and
- (d) other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings).

“sub-system” has the same meaning as in Ontario Regulation 128/04 (Certification of Drinking Water System Operators and Water Quality Analysts) under the SDWA;

“surface water” means water bodies (lakes, wetlands, ponds - including dug-outs), water courses (rivers, streams, water-filled drainage ditches), infiltration trenches, and areas of seasonal wetlands;

“UV” means ultraviolet, as in ultraviolet light produced from an ultraviolet reactor.

2.0 Applicability

- 2.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be established, altered and operated in accordance with the conditions of the drinking water works permit and this licence.

3.0 Licence Expiry

- 3.1 This licence expires on the date identified as the licence expiry date in Schedule A of this licence.

4.0 Licence Renewal

- 4.1 Any application to renew this licence shall be made on or before the date identified as the application for licence renewal date set out in Schedule A of this licence.

5.0 Compliance

- 5.1 The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence and shall take all reasonable measures to ensure any such person complies with the same.

6.0 Licence and Drinking Water Works Permit Availability

- 6.1** At least one copy of this licence and the drinking water works permit shall be stored in such a manner that they are readily viewable by all persons involved in the operation of the drinking water system.

7.0 Permit to Take Water and Drinking Water Works Permit

- 7.1** A permit to take water identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.
- 7.2** A drinking water works permit identified in Schedule A of this licence is the applicable permit on the date identified as the Effective Date of this licence.

8.0 Financial Plan

- 8.1** For every financial plan prepared in accordance with subsections 2(1) and 3(1) of O. Reg. 453/07, the owner of the drinking water system shall:
- 8.1.1 Ensure that the financial plan contains on the front page of the financial plan, the appropriate financial plan number as set out in Schedule A of this licence; and
- 8.1.2 Submit a copy of the financial plan to the Ministry of Municipal Affairs and Housing within three (3) months of receiving approval by a resolution of municipal council or the governing body of the owner.

9.0 Interpretation

- 9.1** Where there is a conflict between the provisions of this licence and any other document, the following hierarchy shall be used to determine the provision that takes precedence:
- 9.1.1 The SDWA;
- 9.1.2 A condition imposed in this licence that explicitly overrides a prescribed regulatory requirement;
- 9.1.3 A condition imposed in the drinking water works permit that explicitly overrides a prescribed regulatory requirement;
- 9.1.4 Any regulation made under the SDWA;
- 9.1.5 Any provision of this licence that does not explicitly override a prescribed regulatory requirement;
- 9.1.6 Any provision of the drinking water works permit that does not explicitly override a prescribed regulatory requirement;
- 9.1.7 Any application documents listed in this licence, or the drinking water works permit from the most recent to the earliest; and

- 9.1.8 All other documents listed in this licence, or the drinking water works permit from the most recent to the earliest.
- 9.1.9 Any other technical bulletin or procedure issued by the Ministry from the most recent to the earliest.
- 9.2** If any requirement of this licence or the drinking water works permit is found to be invalid by a court of competent jurisdiction, the remaining requirements of this licence and the drinking water works permit shall continue to apply.
- 9.3** The issuance of and compliance with the conditions of this licence and the drinking water works permit does not:
 - 9.3.1 Relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including the *Environmental Assessment Act*, R.S.O. 1990, c. E.18; and
 - 9.3.2 Limit in any way the authority of the appointed Directors and provincial officers of the Ministry to require certain steps be taken or to require the owner to furnish any further information related to compliance with the conditions of this licence or the drinking water works permit.
- 9.4** For greater certainty, nothing in this licence or the drinking water works permit shall be read to provide relief from regulatory requirements in accordance with section 46 of the SDWA, except as expressly provided in the licence or the drinking water works permit.

10.0 Adverse Effects

- 10.1** Nothing in this licence or the drinking water works permit shall be read as to permit:
 - 10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect; or
 - 10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.
- 10.2** All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.
- 10.3** Fulfillment of one or more conditions imposed by this licence or the drinking water works permit does not eliminate the requirement to fulfill any other condition of this licence or the drinking water works permit.

11.0 Change of Owner or Operating Authority

- 11.1** This licence is not transferable without the prior written consent of the Director.
- 11.2** The owner shall notify the Director in writing at least 30 days prior to a change of any operating authority identified in Schedule A of this licence.
- 11.2.1** Where the change of operating authority is the result of an emergency situation, the owner shall notify the Director in writing of the change as soon as practicable.

12.0 Information to be Provided

- 12.1** Any information requested by a Director or a provincial officer concerning the drinking water system and its operation, including but not limited to any records required to be kept by this licence or the drinking water works permit, shall be provided upon request.

13.0 Records Retention

- 13.1** Except as otherwise required in this licence or the drinking water works permit, any records required by or created in accordance with this licence or the drinking water works permit, other than the records specifically referenced in section 12 or section 13 of O. Reg. 170/03, shall be retained for at least 5 years and made available for inspection by a provincial officer, upon request.

14.0 Chemicals and Materials

- 14.1** All chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF/372.
- 14.1.1** In the event that the standards are updated, the owner may request authorization from the Director to use any on hand chemicals and materials that previously met the applicable standards.
- 14.2** The most current chemical and material product registration documentation from a testing institution accredited by either the Standards Council of Canada or by the American National Standards Institution ("ANSI") shall be available at all times for each chemical and material used in the operation of the drinking water system that comes into contact with water within the system.
- 14.3** Conditions 14.1 and 14.2 do not apply in the case of the following:
- 14.3.1** Water pipe and pipe fittings meeting AWWA specifications made from ductile iron, cast iron, PVC, fibre and/or steel wire reinforced cement pipe or high density polyethylene (HDPE);
- 14.3.2** Articles made from stainless steel, glass, HDPE or Teflon®;

- 14.3.3 Cement mortar for watermain lining and for water contacting surfaces of concrete structures made from washed aggregates and Portland cement;
- 14.3.4 Gaskets that are made from NSF approved materials;
- 14.3.5 Food grade oils and lubricants, food grade anti-freeze, and other food grade chemicals and materials that are compatible for drinking water use that may come into contact with drinking water, but are not added directly to the drinking water; or
- 14.3.6 Any particular chemical or material where the owner has written documentation signed by the Director that indicates that the Ministry is satisfied that the chemical or material is acceptable for use within the drinking water system and the chemical or material is only used as permitted by the documentation.

15.0 Drawings

- 15.1 All drawings and diagrams in the possession of the owner that show any treatment subsystem as constructed shall be retained by the owner unless the drawings and diagrams are replaced by a revised or updated version showing the subsystem as constructed subsequent to the alteration.
- 15.2 Any alteration to any treatment subsystem shall be incorporated into process flow diagrams, process and instrumentation diagrams, and record drawings and diagrams within one year of the alteration being completed or placed into service.
- 15.3 Process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in a place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system.

16.0 Operations and Maintenance Manual

- 16.1 An up-to-date operations and maintenance manual or manuals shall be maintained and applicable parts of the manual or manuals shall be made available for reference to all persons responsible for all or part of the operation or maintenance of the drinking water system.
- 16.2 The operations and maintenance manual or manuals, shall include at a minimum:
 - 16.2.1 The requirements of this licence and associated procedures;
 - 16.2.2 The requirements of the drinking water works permit for the drinking water system;
 - 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system including where applicable:
 - a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions and other operating conditions, if applicable; and

- b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;
- 16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;
- 16.2.5 Procedures for the operation and maintenance of monitoring equipment;
- 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;
- 16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;
- 16.3** Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.
- 16.4** All of the procedures included or referenced within the operations and maintenance manual must be implemented.

Schedule C: System-Specific Conditions

System Owner	The Corporation of the Town of Moosonee
Licence Number	232-101
Drinking Water System Name	Moosonee Drinking Water System
Licence Effective Date	March 23, 2022

1.0 System Performance

Rated Capacity

- 1.1** For each treatment subsystem listed in column 1 of Table 1, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the value identified as the rated capacity in column 2 of the same row.

Table 1: Rated Capacity	
Column 1 Treatment Subsystem Name	Column 2 Rated Capacity (m ³ /day)
Moosonee Water Treatment Plant	3000

Maximum Flow Rates

- 1.2** For each treatment subsystem listed in column 1 of Table 2, the maximum flow rate of water that flows into a treatment subsystem component listed in column 2 shall not exceed the value listed in column 3 of the same row.

Table 2: Maximum Flow Rates		
Column 1 Treatment Subsystem Name	Column 2 Treatment Subsystem Component	Column 3 Maximum Flow Rate (L/s)
Not Applicable	Not Applicable	Not Applicable

- 1.3** Despite conditions 1.1 and 1.2, a treatment subsystem may be operated temporarily at a maximum daily volume and/or a maximum flow rate above the values set out in column 2 of Table 1 and column 3 of Table 2 respectively for the purposes of fighting a large fire or for the maintenance of the drinking water system.
- 1.4** Condition 1.3 does not authorize the discharge into the distribution system of any water that does not meet all of the requirements of this licence and all other regulatory requirements, including compliance with the Ontario Drinking Water Quality Standards.

Residuals Management

- 1.5** In respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:
- 1.5.1 The annual average concentration of a test parameter identified in column 2 shall:
- a) not exceed the value in column 3 of the same row; and
 - b) be calculated at least once monthly as the running annual average based on the previous twelve months of results;
- 1.5.2 Where the average concentration of a test parameter identified in column 2 exceeds the value in column 3, the concentration shall be reported to the local Ministry district office within 72 hours of receipt of the last lab result used in the calculation;
- 1.5.3 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row;
- 1.5.4 Where the maximum concentration of a test parameter identified in column 2 exceeds the value in column 4, the discharge shall be reported in accordance with s.13.2 of O. Reg. 675.98 and recorded in accordance with s.12.2 of O. Reg. 675.98 within 24 hours of receipt of the lab result; and,
- 1.5.5 The test parameters listed in column 2 of Table 3 shall be sampled in accordance with conditions 5.2, 5.3 and 5.4 of Schedule C in this Licence.

Table 3: Residuals Management			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Annual Average Concentration (mg/L)	Column 4 Maximum Concentration (mg/L)
Not Applicable	Not Applicable	Not Applicable	Not Applicable

UV Disinfection Equipment Performance

- 1.6** For each treatment subsystem or treatment subsystem component listed in column 1 of Table 4, and while directing water to the distribution system and being used to meet pathogen log removal/inactivation credits specified in Schedule E:
- 1.6.1 The UV disinfection equipment shall be operated within the validated limits for the equipment at all times such that a continuous pass-through UV dose is maintained throughout the life time of the UV lamp(s) that is at least the minimum continuous pass-through UV dose set out in column 2 of the same row

- 1.6.2 In addition to any other sampling, analysis and recording that may be required, the ultraviolet light disinfection equipment shall test for the test parameters set out in column 4 of the same row at a testing frequency of once every five (5) minutes or less and record the test data at a recording frequency of once every four (4) hours or less;
- 1.6.3 If there is a UV disinfection equipment alarm signaling that the disinfection equipment is malfunctioning, has lost power, or is not providing the appropriate level of disinfection the test parameters set out in column 4 of the same row shall be recorded at a recording frequency of once every five minutes or less until the alarm condition has been corrected;

- 1.6.4 A monthly summary report shall be prepared at the end of each calendar month which sets out the time, date and duration of each UV equipment alarm described in condition 1.6.3, the volume of water treated during each alarm period and the actions taken by the operating authority to correct the alarm situation;

Table 4: UV Disinfection Equipment			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Minimum Continuous Pass-Through UV Dose (mJ/cm ²)	Column 3 Control Strategy	Column 4 Test Parameter
Not Applicable	Not Applicable	Not Applicable	Not Applicable

2.0 Flow Measurement and Recording Requirements

- 2.1 For each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:
- 2.1.1 The flow rate (L/s) and daily volume (m³/day) of treated water that flows from the treatment subsystem to the distribution system.
- 2.1.2 The flow rate (L/s) and daily volume (m³/day) of water that flows into the treatment subsystem.
- 2.2 For each treatment subsystem component identified in column 2 of Table 2 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of water that flows into the treatment subsystem component.

- 2.3** Where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:
- 2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;
 - 2.3.2 The time and date of the measurement;
 - 2.3.3 The reason for the exceedance; and
 - 2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

3.0 Calibration of Flow Measuring Devices

- 3.1** All flow measuring devices that are required by regulation, by a condition in the drinking water works permit 232-201, or by a condition otherwise imposed by the Ministry, shall be checked and where necessary calibrated in accordance with the manufacturer's instructions.
- 3.2** If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation.
- 3.2.1 For greater certainty, if condition 3.2 applies, the equipment shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

4.0 Calibration of CT Monitoring System

- 4.1** Any measuring instrumentation that forms part of the monitoring system for CT shall be checked and where necessary calibrated at least once every 12 months during which the drinking water system is in operation, or more frequently in accordance with the manufacturer's instructions.
- 4.1.1 For greater certainty, if condition 4.1 applies, the instrumentation shall be checked and where necessary calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.

5.0 Additional Sampling, Testing and Monitoring

Drinking Water Health and Non-Health Related Parameters

- 5.1** For each treatment subsystem or treatment subsystem component identified in column 1 of Tables 5 and 6 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 at the sampling frequency listed in column 3 and at the monitoring location listed in column 4 of the same row.

Table 5: Drinking Water Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Not Applicable	Not Applicable	Not Applicable	Not Applicable

Table 6: Drinking Water Non-Health Related Parameters			
Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sampling Frequency	Column 4 Monitoring Location
Not Applicable	Not Applicable	Not Applicable	Not Applicable

Environmental Discharge Parameters

- 5.2** For each treatment subsystem or treatment subsystem component identified in column 1 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.

- 5.3** For the purposes of Table 7:

5.3.1 Manual Composite means the mean of at least three grab samples taken during a discharge event, with one sample being taken immediately following the commencement of the discharge event, one sample being taken approximately at the mid-point of the discharge event and one sample being taken immediately before the end of the discharge event; and

5.3.2 Automated Composite means samples must be taken during a discharge event by an automated sampler at a minimum sampling frequency of once per hour.

- 5.4** Any sampling, testing and monitoring for the test parameter Total Suspended Solids shall be performed in accordance with the requirements set out in the publication "Standard

Methods for the Examination of Water and Wastewater”, 23rd Edition, 2017, or as amended from time to time by more recently published editions.

Table 7: Environmental Discharge Parameters

Column 1 Treatment Subsystem or Treatment Subsystem Component Name	Column 2 Test Parameter	Column 3 Sample Type	Column 4 Sampling Frequency	Column 5 Monitoring Location
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

5.5 Pursuant to Condition 10 of Schedule B of this licence, the owner may undertake the following environmental discharges associated with the maintenance and/or repair of the drinking water system:

5.5.1 The discharge of potable water from a watermain to a road or storm sewer;

5.5.2 The discharge of potable water from a water storage facility or pumping station:

- a) To a road or storm sewer; or
- b) To a watercourse where the discharge has been dechlorinated and if necessary, sediment and erosion control measures have been implemented.

5.5.3 The discharge of dechlorinated non-potable water from a watermain, water storage facility or pumping station to a road or storm sewer;

5.5.4 The discharge of raw water from a groundwater well to the environment where if necessary, sediment and erosion control measures have been implemented; and

5.5.5 The discharge of raw water, potable water or non-potable water from a treatment subsystem to the environment where if necessary, the discharge has been dechlorinated and sediment and erosion control measures have been implemented.

5.5.6 The discharge of any excess water to a road, storm sewer or the environment, associated with the management of materials excavated as part of watermain construction or repair, where necessary sediment, erosion and environmental control measures have been implemented.

6.0 Studies Required

Harmful Algal Blooms

6.1 The owner shall develop and keep up to date a Harmful Algal Bloom monitoring, reporting and sampling plan, herein known as the “Plan”, to be implemented when a potential harmful algal bloom is suspected or present. The owner shall have the Plan in place on or before **October 14, 2021**.

-
- 6.1.1 The owner must have a copy of the Plan available onsite at the drinking water system, for inspection upon request by Ministry staff.
- 6.1.2 The owner must implement the Plan annually during the harmful algal bloom season, during but not limited to the warm seasonal period between June 1 and October 31 each year, or as otherwise directed by the Ministry or the Medical Officer of Health.
- 6.1.3 The owner must train all relevant drinking water system staff on the Plan prior to the beginning of each warm season, as described in Condition 6.1.2.
- 6.2** For clarity, a Harmful Algal Bloom is considered suspected or occurring when:
- 6.2.1 the owner or operating authority has observed an algal bloom:
- a) near the shoreline at or near the source water intake(s) described in drinking water works permit #232-201, or
 - b) where the intake has an Intake Protection Zone in a source protection plan, within IPZ-1, or
 - c) within a circle that has a radius, measured from the intake, equal to the distance from the intake to the farthest edge of IPZ-2.
- 6.2.2 microcystin has been detected in a raw or treated water sample; and/or,
- 6.2.3 the owner has received any form of notification related to an algal bloom from the Ministry, a Medical Officer of Health, or the public; or,
- 6.2.4 the presence of or identification of cyanobacteria has been determined through optical probes or other analytic techniques used by the drinking water system.
- 6.3** The Plan described in condition 6.1 must include, at a minimum:
- 6.3.1 details relating to visual monitoring for harmful algal blooms at or near the drinking water system intake(s),
- a) as described in drinking water works permit #232-201, or
 - b) where the intake has an Intake Protection Zone in a source protection plan, within IPZ-1, or
 - c) within a circle that has a radius, measured from the intake, equal to the distance from the intake to the farthest edge of IPZ-2.
- 6.3.2 details relating to visual monitoring of shoreline; this is applicable to drinking water systems where the proximity of the intake(s) may be of concern.
- 6.3.3 details relating to reporting the observed or suspected harmful algal bloom, as described in section 6.2:
- a) to the Overall Responsible Operator(s) and/or Operator(s)-in-Charge if the blooms have been observed or suspected by a duty operator; the

Plan shall include wording that directs relevant drinking water staff to follow the instructions provided by the Overall Responsible Operator(s) or the Operator(s)-in-Charge;

- b) to the medical officer of health; and
- c) to the local MECP representative and the Ministry's Spills Action Centre.,

6.3.4 a sampling plan, including the identification of sample location(s) and frequencies that at a minimum match those described in condition 6.4.

6.3.5 triggers that may increase the required sampling frequency;

6.3.6 up-to-date records that document staff training on the harmful algal bloom monitoring, reporting, and sampling procedures.

6.4 Any water samples collected under Condition 6.3.4 must be:

6.4.1 collected, at a minimum, once per week, or as otherwise directed by the Ministry or the medical officer of health;

6.4.2 collected prior to any treatment, if the sample is taken from raw water;

6.4.3 collected at the point of entry into the distribution system, if the sample is taken from treated water;

6.4.4 collected from the shoreline by the drinking water system, if applicable based on Condition 6.3.1;

6.4.5 submitted to a laboratory licensed to perform ELISA testing for total microcystin;

6.4.6 repeatedly collected until 3 consecutive samples have shown non-detection of microcystin and the algal bloom is no longer suspected or visually observed.

7.0 Source Protection

7.1 The owner of the drinking water system shall implement risk management measures, as appropriate, to manage any potential threat to drinking water that results from the operation of the drinking water system.

7.2 The owner of the system shall notify the Director in writing within thirty (30) days of any approved changes to an applicable source protection plan that impact the assessed threat level of a fuel oil system identified in Schedule A of drinking water works permit.

7.3 The notification required in condition 7.2 shall include:

7.3.1 A description of the changes and their impact on the assessed threat level of the fuel oil system(s); and,

7.3.2 A timeline for re-assessing the threat level and providing the results of the assessment to the Director.

Schedule D: Conditions for Relief from Regulatory Requirements

System Owner	The Corporation of the Town of Moosonee
Licence Number	232-101
Drinking Water System Name	Moosonee Drinking Water System
Licence Effective Date	March 23, 2022

No relief from regulatory requirements is authorized by the Director under section 46 of the SDWA in respect of the drinking water system.

Schedule E: Pathogen Log Removal/Inactivation Credits

System Owner	The Corporation of the Town of Moosonee
Licence Number	232-101
Drinking Water System Name	Moosonee Drinking Water System
Licence Effective Date	March 23, 2022

1.0 Primary Disinfection Pathogen Log Removal/Inactivation Credits

Moosonee Water Treatment Plant

Moose River [SURFACE WATER]

Minimum Log Removal/ Inactivation Required	Cryptosporidium Oocysts	Giardia Cysts ^a	Viruses ^b
Moosonee Water Treatment Plant	2	3	4

^a At least 0.5 log inactivation of Giardia shall be achieved by the disinfection portion of the overall water treatment process.

^b At least 2 log inactivation of viruses shall be achieved by disinfection.

Log Removal/Inactivation Credits Assigned ^c	Cryptosporidium Oocysts	Giardia Cysts	Viruses
Conventional Filtration	2	2.5	2
Chlorination [CT: Clearwell]	-	0.5 +	2 +

^c Log removal/inactivation credit assignment is based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met.

Treatment Component	Log Removal/Inactivation Credit Assignment Criteria
Conventional Filtration	<ol style="list-style-type: none"> 1. A chemical coagulant shall be used at all times when the treatment plant is in operation; 2. Chemical dosages shall be monitored and adjusted in response to variations in raw water quality; 3. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times; 4. Filtrate turbidity shall be continuously monitored from each filter; and 5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.
Chlorination	<ol style="list-style-type: none"> 1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's <i>Procedure for Disinfection of Drinking Water in Ontario</i>; and 2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.
Primary Disinfection Notes	



SCHEDULE E: DRINKING WATER WORKS PERMIT



DRINKING WATER WORKS PERMIT

Permit Number: 232-201
Issue Number: 4

Pursuant to the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32, and the regulations made thereunder and subject to the limitations thereof, I hereby issue this drinking water works permit under Part V of the *Safe Drinking Water Act*, 2002, S.O. 2002, c. 32 to:

The Corporation of the Town of Moosonee

**5 First Street
P.O. Box 727
Moosonee ON, P0L 1Y0**

For the following municipal residential drinking water system:

Moosonee Drinking Water System

This drinking water works permit includes the following:

Schedule	Description
Schedule A	Drinking Water System Description
Schedule B	General
Schedule C	All documents issued as Schedule C to this drinking water works permit which authorize alterations to the drinking water system
Schedule D	Process Flow Diagrams

Upon the effective date of this drinking water works permit # 232-201, all previously issued versions of permit # 232-201 are revoked and replaced by this permit.

DATED at TORONTO this 23rd day of March, 2022

Signature

Aziz Ahmed, P.Eng.
Director
Part V, *Safe Drinking Water Act*, 2002

Schedule A: Drinking Water System Description

System Owner	The Corporation of the Town of Moosonee
Permit Number	232-201
Drinking Water System Name	Moosonee Drinking Water System
Permit Effective Date	March 23, 2022

1.0 System Description

- 1.1 The following is a summary description of the works comprising the above drinking water system:

Overview

The **Moosonee Drinking Water System** takes the water from Moose River. The treatment plant consists of dual train conventional filtration (Coagulation (PAC), flocculation, settling and filtration) followed by chlorination with sodium hypochlorite, [2] pumping stations (low lift, high lift), [1] storage reservoirs, [0] elevated storage tanks and approximately 20 kilometers watermains.

Moosonee Water Treatment Plant

Treatment Plant

Name	Moosonee Water Treatment Plant
Street Address	241 Ferguson Road North
UTM Coordinates	NAD 83: Zone 17: Easting 526700: Northing 5681443
System Type	Treatment and Distribution
Notes	

Intake Pipe

Description	Inlet structure drawing water from Moose River via a submerged schedule 40 steel intake pipe consisting of three (3) horizontal inlet screens, connected to the low lift pumping station.
Notes	

Low Lift Pumping Station

Location	Low lift pumping station constructed below grade at the edge of the river bank.
Equipment	Three (3) submersible pumps (two duty and one standby), each rated at 19.1 L/s installed in individual well style casing configuration connected to a common header.
Notes	

Treatment

Description	Dual train, package
Capacity	Each train rated at 1,500 m ³ /day.
Coagulation	Coagulation/Flash mixing tank with flash mixer.
Flocculation	Two-stage flocculation tank equipped with variable speed flocculators in each unit.
Clarification	Upflow solids contact clarifier with inclined plate settlers and automatic sludge withdrawal.
Filtration	Dual media filters equipped with water backwash and separate air scour.
Equipment	Backwash pumps and air scour compressor (duty and standby).
Chemical Feed Systems	Chemical feed system for primary coagulant (poly-aluminum chloride), coagulant aid, disinfection (sodium hypochlorite) and pH adjustment (sodium hydroxide) including chemical storage tanks and feed pumps (duty and standby pumps for each system).
Instrumentation and Monitoring	Instrumentation and monitors including continuous turbidity monitoring and free chlorine residual monitoring of finished water.
Notes	

High Lift Pumps

Description	Four (4) Pumps
Capacity	Three (3) pumps, each rated at 24.7 L/s and one (1) emergency (fire) pump rated at 155 L/s.
Notes	One backwash pump rated at 105 L/s

Reservoir

Description	Inground concrete water storage reservoir constructed beneath the treatment plant and high lift pumping station.
Dimensions	Dual cell concrete storage reservoir with a capacity of 2,140 m ³ .
Notes	

SCADA System

Description	PLC and SCADA control system providing automatic plant operation and data recording capabilities with remote monitoring features.
Notes	System control with data acquisition including various on-line analyzers and monitors, including the following regulatory equipment: <ul style="list-style-type: none">- Flow meters - on each train before entry to the trains- Flow meter - on inlet to clearwell- Flow meter - at Point of Entry- Turbidity monitor - for each process train- Chlorine analyzer at Point of Entry- pH analyzer (with temperature sensor) at Point of Entry

Waste Water Handling System

Description	Waste water handling system bagger for backwash waste and clarifier sludge blowdown.
Equipment	Waste water handling system including a dual compartment waste collection system and 8-bag sludge bagger to collect backwash waste and clarifier sludge blowdown.
Notes	Liquid generated from the sludge bags and plant sewage directed to sewage lift station equipped with a duty and a standby pump, for pumping waste to the community Waste Water Treatment Facility

Fuel Oil Systems**Fuel Storage Locations**

Location	473356.66, 5681453.04, 44U
Description	Diesel for Gen Set at WTP – 1000 litres Double walled tank installed 2017
Fuel Type	Diesel
Source Protection Area	Not Applicable
Notes	

Watermains

1.2 Watermains within the distribution system comprise:

- 1.2.1 Watermains that have been set out in each document or file identified in column 1 of Table 1.

Table 1: Watermains	
Column 1 Document or File Name	Column 2 Date
Valve Book overall map.pdf	1/11/2019

- 1.2.2 Watermains that have been added, modified, replaced or extended further to the provisions of Schedule C of this drinking water works permit on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.
- 1.2.3 Watermains that have been added, modified, replaced or extended further to an authorization by the Director on or after the date identified in column 2 of Table 1 for each document or file identified in column 1.

Schedule B: General

System Owner	The Corporation of the Town of Moosonee
Permit Number	232-201
Drinking Water System Name	Moosonee Drinking Water System
Permit Effective Date	March 23, 2022

1.0 Applicability

- 1.1 In addition to any other applicable legal requirements, the drinking water system identified above shall be altered and operated in accordance with the conditions of this drinking water works permit and the licence #232-101.
- 1.2 The definitions and conditions of licence #232-101 are incorporated into this permit and also apply to this drinking water system.

2.0 Alterations to the Drinking Water System

- 2.1 Any document issued by the Director to be incorporated into Schedule C to this drinking water works permit shall provide authority to alter the drinking water system in accordance with the applicable conditions of this drinking water works permit and licence #232-101.
- 2.2 All documents issued by the Director as described in condition 2.1 shall form part of this drinking water works permit.
- 2.3 All parts of the drinking water system in contact with drinking water that are added, modified, replaced, extended shall be disinfected in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:
- a) The ministry's Watermain Disinfection Procedure, dated August 1, 2020;
 - b) Subject to condition 2.3.2, any updated version of the ministry's Watermain Disinfection Procedure;
 - c) AWWA C652 – Standard for Disinfection of Water-Storage Facilities;
 - d) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
 - e) AWWA C654 – Standard for Disinfection of Wells.
- 2.3.1 For greater clarity, where an activity has occurred that could introduce contamination, including but not limited to repair, maintenance, or physical / video inspection, all equipment that may come in contact with the drinking water system shall be disinfected in accordance with the requirements of condition 2.3. above.
- 2.3.2 Updated requirements described in condition 2.3 b) are effective six months from the date of publication of the updated Watermain Disinfection Procedure.

- 2.4 The owner shall notify the Director in writing within thirty (30) days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:
- 2.4.1 Schedule B to this drinking water works permit which would require an alteration of the description of a drinking water system component described in Schedule A of this drinking water works permit;
 - 2.4.2 Any document to be incorporated in Schedule C to this drinking water works permit respecting works other than watermain; or
 - 2.4.3 Any approval issued prior to the issue date of the first drinking water works permit respecting works other than watermain which were not in service at the time of the issuance of the first drinking water works permit.
- 2.5 The notification required in condition 2.4 shall be submitted using the "Director Notification Form" published by the Ministry.
- 2.6 For greater certainty, the notification requirements set out in condition 2.4 do not apply to any addition, modification, replacement, removal or extension in respect of the drinking water system which:
- 2.6.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03;
 - 2.6.2 Constitutes maintenance or repair of the drinking water system; or
 - 2.6.3 Is a watermain authorized by condition 3.1 of Schedule B of this drinking water works permit.
- 2.7 The owner shall notify the legal owner of any part of the drinking water system that is prescribed as a municipal drinking water system by section 2 of O. Reg. 172/03 of the requirements of the licence and this drinking water works permit as applicable to the prescribed system.
- 2.8 For greater certainty, the owner may only carry out alterations to the drinking water system in accordance with this drinking water works permit after having satisfied other applicable legal obligations, including those arising from the *Environmental Assessment Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act, 2001* and *Greenbelt Act, 2005*.

3.0 Watermain Additions, Modifications, Replacements and Extensions

- 3.1 The owner may alter the drinking water system, or permit it to be altered by a person acting on the owner's behalf, by adding, modifying, replacing or extending a watermain within the distribution system subject to the following conditions:
- 3.1.1 The design of the watermain addition, modification, replacement or extension:
 - a) Has been prepared by a licensed engineering practitioner;
 - b) Has been designed only to transmit water and has not been designed to treat water;

- c) Satisfies the design criteria set out in the Ministry publication “Watermain Design Criteria for Future Alterations Authorized under a Drinking Water Works Permit – June 2012”, as amended from time to time; and
 - d) Is consistent with or otherwise addresses the design objectives contained within the Ministry publication “Design Guidelines for Drinking Water Systems, 2008”, as amended from time to time.
- 3.1.2 The maximum demand for water exerted by consumers who are serviced by the addition, modification, replacement or extension of the watermain will not result in an exceedance of the rated capacity of a treatment subsystem or the maximum flow rate for a treatment subsystem component as specified in the licence, or the creation of adverse conditions within the drinking water system.
- 3.1.3 The watermain addition, modification, replacement or extension will not adversely affect the distribution system’s ability to maintain a minimum pressure of 140 kPa at ground level at all points in the distribution system under maximum day demand plus fire flow conditions.
- 3.1.4 Secondary disinfection will be provided to water within the added, modified, replaced or extended watermain to meet the requirements of O. Reg. 170/03.
- 3.1.5 The watermain addition, modification, replacement or extension is wholly located within the municipal boundary over which the owner has jurisdiction.
- 3.1.6 The owner of the drinking water system consents in writing to the watermain addition, modification, replacement or extension.
- 3.1.7 A licensed engineering practitioner has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of condition 3.1.1.
- 3.1.8 The owner of the drinking water system has verified in writing that the watermain addition, modification, replacement or extension meets the requirements of conditions 3.1.2 to 3.1.6.
- 3.2 The authorization for the addition, modification, replacement or extension of a watermain provided for in condition 3.1 does not include the addition, modification, replacement or extension of a watermain that:
 - 3.2.1 Passes under or through a body of surface water, unless trenchless construction methods are used;
 - 3.2.2 Has a nominal diameter greater than 750 mm;
 - 3.2.3 Results in the fragmentation of the drinking water system; or
 - 3.2.4 Connects to another drinking water system, unless:
 - a) Prior to construction, the owner of the drinking water system seeking the connection obtains written consent from the owner or owner’s delegate of the drinking water system being connected to; and

- b) The owner of the drinking water system seeking the connection retains a copy of the written consent from the owner or owner's delegate of the drinking water system being connected to as part of the record that is recorded and retained under condition 3.3.
- 3.3 The verifications required in conditions 3.1.7 and 3.1.8 shall be:
- 3.3.1 Recorded on "Form 1 – Record of Watermains Authorized as a Future Alteration", as published by the Ministry, prior to the watermain addition, modification, replacement or extension being placed into service; and
- 3.3.2 Retained for a period of ten (10) years by the owner.
- 3.4 For greater certainty, the verification requirements set out in condition 3.3 do not apply to any addition, modification, replacement or extension in respect of the drinking water system which:
- 3.4.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
- 3.4.2 Constitutes maintenance or repair of the drinking water system.
- 3.5 The document or file referenced in Column 1 of Table 1 of Schedule A of this drinking water works permit that sets out watermains shall be retained by the owner and shall be updated to include watermain additions, modifications, replacements and extensions within 12 months of the addition, modification, replacement or extension.
- 3.6 The updates required by condition 3.5 shall include watermain location relative to named streets or easements and watermain diameter.
- 3.7 Despite clause (a) of condition 3.1.1 and condition 3.1.7, with respect to the replacement of an existing watermain or section of watermain that is 6.1 meters in length or less, if a licensed engineering practitioner has:
- 3.7.1 inspected the replacement prior to it being put into service;
- 3.7.2 prepared a report confirming that the replacement satisfies clauses (b), (c) and (d) of condition 3.1.1 (i.e. "Form 1 – Record of Watermains Authorized by a Future Alteration" (Form 1), Part 3, items No. 2, 3 and 4); and
- 3.7.3 appended the report referred to in condition 3.7.2 to the completed Form 1,
- the replacement is exempt from the requirements that the design of the replacement be prepared by a licensed engineering practitioner and that a licensed engineering practitioner verify on Form 1, Part 3, item No. 1 that a licensed engineering practitioner prepared the design of the replacement.
- 3.8 For greater certainty, the exemption in condition 3.7 does not apply to the replacement of an existing watermain or section of watermain if two or more sections of pipe, each of which is 6.1 meters in length or less, are joined together, if the total length of replacement pipes joined together is greater than 6.1 meters.

4.0 Minor Modifications to the Drinking Water System

-
- 4.1 The drinking water system may be altered by adding, modifying or replacing the following components in the drinking water system:
- 4.1.1 Coagulant feed systems in the treatment system, including the location and number of dosing points:
 - a) Prior to making any alteration to the drinking water system under condition 4.1.1, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.1.1 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.1.1 b) shall be submitted using the "Director Notification Form" published by the Ministry
 - 4.1.2 Instrumentation and controls, including new SCADA systems and upgrades to SCADA system hardware;
 - 4.1.3 SCADA system software or programming that:
 - a) Measures, monitors or reports on a regulated parameter;
 - b) Measures, monitor or reports on a parameter that is used to calculate CT; or,
 - c) Calculates CT for the system or is part of the process algorithm that calculates log removal, where the impacts of addition, modification or replacement have been reviewed by a licensed engineering practitioner;
 - 4.1.4 Filter media, backwashing equipment, filter troughs, and under-drains and associated equipment in the treatment system;
 - 4.1.5 Spill containment works; or,
 - 4.1.6 Coarse screens and fine screens
- 4.2 The drinking water system may be altered by adding, modifying, replacing or removing the following components in the drinking water system:
- 4.2.1 Treated water pumps, pressure tanks, and associated equipment;
 - 4.2.2 Raw water pumps and process pumps in the treatment system;
 - 4.2.3 Inline booster pumping stations that are not associated with distribution system storage facilities and are on a watermain with a nominal diameter not exceeding 200 mm;
 - 4.2.4 Re-circulation devices within distribution system storage facilities;
 - 4.2.5 In-line mixing equipment;
 - 4.2.6 Chemical metering pumps and chemical handling pumps;

- 4.2.7 Chemical storage tanks (excluding fuel storage tanks) and associated equipment; or,
- 4.2.8 Measuring and monitoring devices that are not required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry.
- 4.2.9 Chemical injection points;
- 4.2.10 Valves.
- 4.3 The drinking water system may be altered by replacing the following:
 - 4.3.1 Raw water piping, treatment process piping or treated water piping within the treatment subsystem;
 - 4.3.2 Measuring and monitoring devices that are required by regulation, by a condition in the Drinking Water Works Permit or by a condition otherwise imposed by the Ministry.
 - 4.3.3 Coagulants and pH adjustment chemicals, where the replacement chemicals perform the same function;
 - a) Prior to making any alteration to the drinking water system under condition 4.3.3, the owner shall undertake a review of the impacts that the alteration might have on corrosion control or other treatment processes; and
 - b) The owner shall notify the Director in writing within thirty (30) days of any alteration made under condition 4.3.3 and shall provide the Director with a copy of the review.
 - c) The notification required in condition 4.3.3 b) shall be submitted using the "Director Notification Form" published by the Ministry.
- 4.4 Any alteration of the drinking water system made under conditions 4.1, 4.2 or 4.3 shall not result in:
 - 4.4.1 An exceedance of a treatment subsystem rated capacity or a treatment subsystem component maximum flow rate as specified in the licence;
 - 4.4.2 The bypassing or removal of any unit process within a treatment subsystem;
 - 4.4.3 The addition of any new unit process other than coagulation within a treatment subsystem;
 - 4.4.4 A deterioration in the quality of drinking water provided to consumers;
 - 4.4.5 A reduction in the reliability or redundancy of any component of the drinking water system;

- 4.4.6 A negative impact on the ability to undertake compliance and other monitoring necessary for the operation of the drinking water system; or
- 4.4.7 An adverse effect on the environment.
- 4.5 The owner shall verify in writing that any addition, modification, replacement or removal of drinking water system components in accordance with conditions 4.1, 4.2 or 4.3 has met the requirements of the conditions listed in condition 4.4.
- 4.6 The verifications and documentation required in condition 4.5 shall be:
 - 4.6.1 Recorded on “Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System” published by the Ministry, prior to the modified or replaced components being placed into service; and
 - 4.6.2 Retained for a period of ten (10) years by the owner.
- 4.7 For greater certainty, the verification requirements set out in conditions 4.5 and 4.6 do not apply to any addition, modification, replacement or removal in respect of the drinking water system which:
 - 4.7.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
 - 4.7.2 Constitutes maintenance or repair of the drinking water system, including software changes to a SCADA system that are not listed in condition 4.1.3
- 4.8 The owner shall update any drawings maintained for the drinking water system to reflect the modification or replacement of the works, where applicable.

5.0 Equipment with Emissions to the Air

- 5.1 The drinking water system may be altered by adding, modifying or replacing any of the following drinking water system components that may discharge or alter the rate or manner of a discharge of a compound of concern to the air:
 - 5.1.1 Any equipment, apparatus, mechanism or thing that is used for the transfer of outdoor air into a building or structure that is not a cooling tower;
 - 5.1.2 Any equipment, apparatus, mechanism or thing that is used for the transfer of indoor air out of a space used for the production, processing, repair, maintenance or storage of goods or materials, including chemical storage;
 - 5.1.3 Laboratory fume hoods used for drinking water testing, quality control and quality assurance purposes;
 - 5.1.4 Low temperature handling of compounds with a vapor pressure of less than 1 kilopascal;
 - 5.1.5 Maintenance welding stations;
 - 5.1.6 Minor painting operations used for maintenance purposes;

- 5.1.7 Parts washers for maintenance shops;
 - 5.1.8 Emergency chlorine and ammonia gas scrubbers and absorbers;
 - 5.1.9 Venting for activated carbon units for drinking water taste and odour control;
 - 5.1.10 Venting for a stripping unit for methane removal from a groundwater supply;
 - 5.1.11 Venting for an ozone treatment unit;
 - 5.1.12 Natural gas or propane fired boilers, water heaters, space heaters and make-up air units with a total facility-wide heat input rating of less than 20 million kilojoules per hour, and with an individual fuel energy input of less than or equal to 10.5 gigajoules per hour; or
 - 5.1.13 Emergency generators that fire No. 2 fuel oil (diesel fuel) with a sulphur content of 0.5 per cent or less measured by weight, natural gas, propane, gasoline or biofuel, and that are used for emergency duty only with periodic testing.
- 5.2 The owner shall not make an addition, modification, or replacement described in condition 5.1 in relation to an activity that is not related to the treatment and/or distribution of drinking water.
- 5.3 The emergency generators identified in condition 5.1.13 shall not be used for non-emergency purposes including the generation of electricity for sale or for peak shaving purposes.
- 5.4 The owner shall prepare an emission summary table for nitrogen oxides emissions only, for each addition, modification or replacement of emergency generators identified in condition 5.1.13.

Performance Limits

- 5.5 The owner shall ensure that a drinking water system component identified in conditions 5.1.1 to 5.1.13 is operated at all times to comply with the following limits:
- 5.5.1 For equipment other than emergency generators, the maximum concentration of any compound of concern at a point of impingement shall not exceed the corresponding point of impingement limit;
 - 5.5.2 For emergency generators, the maximum concentration of nitrogen oxides at sensitive receptors shall not exceed the applicable point of impingement limit, and at non-sensitive receptors shall not exceed the Ministry half-hourly screening level of 1880 ug/m³ as amended; and
 - 5.5.3 The noise emissions comply at all times with the limits set out in publication NPC-300, as applicable.
- 5.6 The owner shall verify in writing that any addition, modification or replacement of works in accordance with condition 5.1 has met the requirements of the conditions listed in condition 5.5.

- 5.7 The owner shall document how compliance with the performance limits outlined in condition 5.5.3 is being achieved, through noise abatement equipment and/or operational procedures.
- 5.8 The verifications and documentation required in conditions 5.6 and 5.7 shall be:
- 5.8.1 Recorded on "Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere", as published by the Ministry, prior to the additional, modified or replacement equipment being placed into service; and
- 5.8.2 Retained for a period of ten (10) years by the owner.
- 5.9 For greater certainty, the verification and documentation requirements set out in conditions 5.6 and 5.8 do not apply to any addition, modification or replacement in respect of the drinking water system which:
- 5.9.1 Is exempt from subsection 31(1) of the SDWA by subsection 9.(2) of O. Reg. 170/03; or
- 5.9.2 Constitutes maintenance or repair of the drinking water system.
- 5.10 The owner shall update any drawings maintained for the works to reflect the addition, modification or replacement of the works, where applicable.

6.0 Previously Approved Works

- 6.1 The owner may add, modify, replace or extend, and operate part of a municipal drinking water system if:
- 6.1.1 An approval was issued after January 1, 2004 under section 36 of the SDWA in respect of the addition, modification, replacement or extension and operation of that part of the municipal drinking water system;
- 6.1.2 The approval expired by virtue of subsection 36(4) of the SDWA; and
- 6.1.3 The addition, modification, replacement or extension commenced within five years of the date that activity was approved by the expired approval.

7.0 System-Specific Conditions

- 7.1 Not Applicable

8.0 Source Protection

- 8.1 Not Applicable

Schedule C: Authorization to Alter the Drinking Water System

System Owner	The Corporation of the Town of Moosonee
Permit Number	232-201
Drinking Water System Name	Moosonee Drinking Water System
Permit Effective Date	March 23, 2022

1.0 General

- 1.1 Table 2 provides a reference list of all documents to be incorporated into Schedule C that have been issued as of the date that this permit was issued.

1.1.1 Table 2 is not intended to be a comprehensive list of all documents that are part of Schedule C. For clarity, any document issued by the Director to be incorporated into Schedule C after this permit has been issued is considered part of this drinking water works permit.

Table 2: Schedule C Documents				
Column 1 Issue #	Column 2 Issued Date	Column 3 Description	Column 4 Status	Column 5 DN#
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

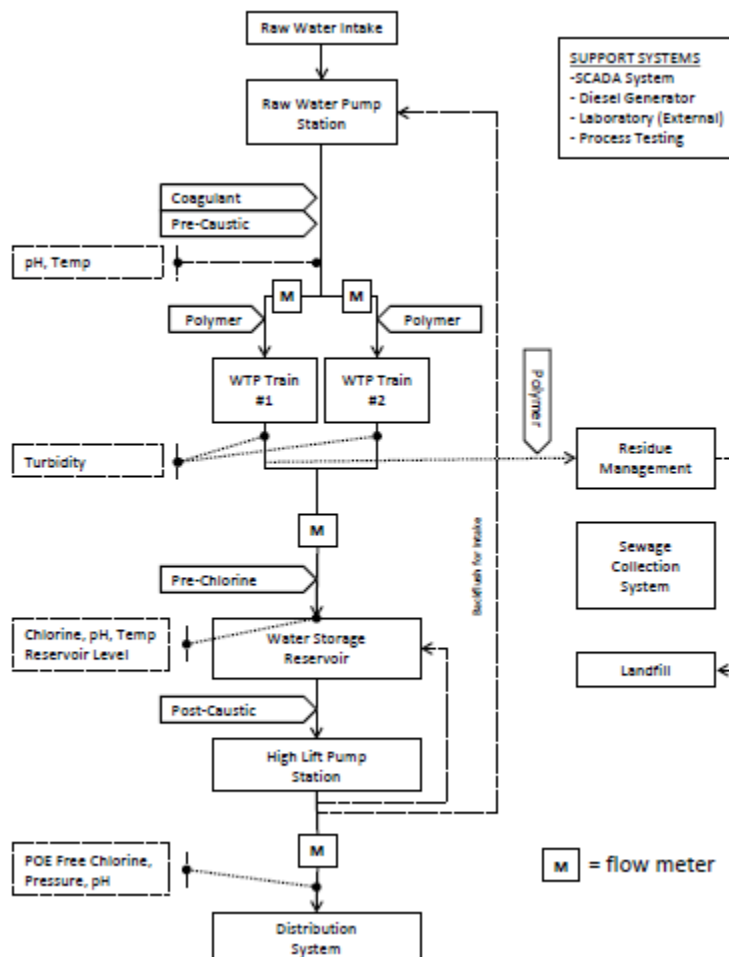
- 1.2 For each document described in columns 1, 2 and 3 of Table 2, the status of the document is indicated in column 4. Where this status is listed as 'Archived', the approved alterations have been completed and relevant portions of this permit have been updated to reflect the altered works. These 'Archived' Schedule C documents remain as a record of the alterations.

Schedule D: Process Flow Diagrams

System Owner	The Corporation of the Town of Moosonee
Permit Number	232-201
Drinking Water System Name	Moosonee Drinking Water System
Permit Effective Date	March 23, 2022

1.0 Process Flow Diagrams

Moosonee Water Treatment Plant



[Source: Moosonee Operational Plan 04.29.2020]

Note: this process flow diagram is for reference only, and represents a high level overview of the system as of April 29, 2020.



SCHEDULE F: ENVIRONMENTAL COMPLIANCE APPROVAL

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4370-8WAQVX

Issue Date: July 25, 2012

The Corporation of the Town of Moosonee
5 First St
Post Office Box, No. 727
Moosonee, Ontario
P0L 1Y0

Site Location: Moosonee Lagoon Facility
Part 2 and Part 3 of WB 140
Township of Harden, District of Cochrane

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the existing municipal sewage *works* for the transmission, treatment and disposal of sewage to service the community of Moosonee in the District of Cochrane, including a sewage lagoon system having a *Rated Capacity* of 1,466 m³/d, and consisting of the following:

Sewage Lift Station No. 1

- sewage pumping station located on Airport Road near the water treatment plant, consisting of a 2.4 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 9.1 L/s and a 125 mm diameter forcemain discharging to Sewage Lift Station No. 2, including electrical, mechanical and power connection to engine generator at the water treatment plant;

Sewage Lift Station No. 2

- sewage pumping station located at the intersection of Bay Road and Fourth Street, consisting of a 2.4 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 27.7 L/s and a 200 mm diameter forcemain discharging to Sewage Lift Station No. 3, including electrical, mechanical and a standby engine generator;

Sewage Lift Station No. 3

- sewage pumping station located at the intersection of Ferguson Road and Lee Crescent, consisting of a 3.0 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby)

each rated a 73.5 L/s and a third pump (spare) and a 300 mm diameter forcemain discharging to the Sewage Treatment Lagoon, including electrical, mechanical and a standby engine generator;

Sewage Treatment Lagoon

- a seasonal discharge lagoon facility, with a two-cell configuration designed to operate on an alternate fill-and-draw basis, with a useable volume of approximately 165,658 m³ per cell, based on a maximum operating depth of 1.8 m plus an allowance for retention of 0.3 m of liquid after the seasonal drawdown and a freeboard of 0.9 m;
- inlet and outlet control structures , interconnecting pipework to allow maximum flexibility of operation and overflow pipe between cells;
- outfall pumping station located at the lagoon site, consisting of a 3.0 m diameter pre-cast concrete wet well equipped with two (2) submersible pumps (duty and standby) each rated a 276 L/s discharging to a 300 metre long peatland polishing system located surrounding the lagoon site, with final discharge via Little Nicholas Creek to Moose River;

all in accordance with the submitted supporting documents listed in Schedule A.

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules attached to it, and the application;

"Average Daily Flow " means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

"BOD5 " (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

"By-pass" means any discharge from the *Works* that does not undergo any treatment or receives only partial treatment before it is discharged to the environment;

"CBOD5 " means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"Daily Concentration " means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"Director" means a person appointed by the Minister pursuant to section 5 of the *EPA* for the purposes of Part II.1 of the *EPA*;

"District Manager " means the District Manager of the Timmins Office of the Ministry;

"E. Coli " refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;

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

"*Geometric Mean Density* " is the nth root of the product of multiplication of the results of n number of samples over the period specified;

"*Ministry*" means the ministry of the government of Ontario responsible for the *EPA* and *OWRA* and includes all officials, employees or other persons acting on its behalf;

"*Operating Period* " means the period of time beginning on completion of the fall seasonal discharge of the lagoon and ending on completion of the following spring seasonal discharge;

"*Owner* " means The Corporation of the Town of Moosonee and includes its successors and assignees;

"*OWRA*" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

"*Rated Capacity* " means the *Average Daily Flow* for which the *Works* are approved to handle;

"*Regional Director* " means the Regional Director of the Northern Region of the Ministry;

"*Seasonal Average Concentration* " means the arithmetic mean of all *Daily Concentrations* of a contaminant in the effluent sampled or measured, or both, during a single discharge season;

"*Works* " means the sewage works described in the *Owner* 's application, this *Approval* and in the supporting documentation referred to herein, to the extent approved by this *Approval*.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Approval* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval* , and the application for approval of the *Works*.

(3) Where there is a conflict between a provision of any document in the schedule referred to in this *Approval* and the conditions of this *Approval* , the Conditions in this *Approval* shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in the Schedule submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The Conditions of this *Approval* are severable. If any Condition of this *Approval* , or the application of any requirement of this *Approval* to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this *Approval* shall not be affected thereby.

(6) The approval granted by this *Approval* is based upon a review of the *Works* in the context of its effect on the environment, its process performance and general principles of wastewater engineering. The review did not include a consideration of the architectural, mechanical, electrical or structural components and minor details of the *Works* except to the extent necessary to review the *Works* .

2. EXPIRY OF APPROVAL

This *Approval* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Approval* .

3. CHANGE OF OWNER

(1) The *Owner* shall notify the *District Manager* and the *Director* , in writing, of any of the following changes within 30 days of the change occurring:

(a) change of *Owner* ;

(b) change of address of the *Owner* ;

(c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager* ;

(d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager* ;

(2) In the event of any change in ownership of the *Works* , other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Approval*, and a copy of such notice shall be forwarded to the *District Manager* and the *Director* .

4. RECORD DRAWINGS

(1) A set of as-built drawings showing the works “as constructed” shall be maintained. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the *Works* for the operational life of the *Works* .

5. BY-PASSES

(1) Any *By-pass* of sewage from any portion of the *Works* is prohibited, except where:

(a) it is necessary to avoid loss of life, personal injury, danger to public health or severe property damage;

(b) the *District Manager* agrees that it is necessary for the purpose of carrying out essential maintenance and the *District Manager* has given prior written acknowledgment of the *by-pass* ; or

(c) the *Regional Director* has given prior written acknowledgment of the *By-pass* .

(2) The *Owner* shall collect at least one (1) grab sample of the *By-pass* and have it analyzed for the parameters outlined in Condition 7, using the protocols in Condition 10.

(3) The *Owner* shall maintain a logbook of all *By-pass* events which shall include, at a minimum, the time, location, duration, quantity of *By-pass* , the authority for *By-pass* pursuant to subsection (1), and the reasons for the occurrence.

(4) The *Owner* shall, in the event of a *By-pass* event pursuant to subsection (1), disinfect the by-passed effluent prior to it reaching the receiver such that the receiver is not negatively impacted.

6. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent discharged from the Sewage Treatment Lagoon:

Table 1 - Effluent Objectives	
Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)
<i>CBOD5</i>	20.0
Total Suspended Solids	25.0
<i>E. Coli</i>	150 organisms/100 mL Seasonal <i>Geometric Mean Density</i>

(2) The *Owner* shall use best efforts to:

(a) maintain the pH of the effluent from the *Works* within the range of 6.5 - 8.5, inclusive, at all times;

(b) operate the works within the *Rated Capacity* of the *Works* ;

(c) ensure that the effluent from the *Works* is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

(3) The *Owner* shall include in all reports submitted in accordance with Condition 11 a summary of the efforts made and results achieved under this Condition.

7. EFFLUENT LIMITS

(1) The *Owner* shall design and construct the *Works* and operate and maintain the *Works* such that the concentrations and waste loadings of the materials named below as effluent parameters are not exceeded in the effluent discharged to the rapid infiltration basins.

Table 2 - Effluent Limits	
Effluent Parameter	Average Concentration (milligrams per litre unless otherwise indicated)
Column 1	Column 2
CBOD5	25.0
Total Suspended Solids	30.0
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times	

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The *Seasonal Average Concentration* of a parameter named in Column 1 of Table 2 shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2.

(b) The pH of the effluent shall be maintained within the limits outlined in Table 2, at all times.

(3) The effluent limits set out in this condition shall apply upon the issuance of this *Approval*.

8. OPERATION AND MAINTENANCE

(1) The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Approval* are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this *Approval* and the *Act* and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the *Works* .

(2) The *Owner* shall prepare or update the operations manual within six (6) months of *Substantial Completion* of the *Works* , that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of the *Works* ;

(b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;

(d) procedures for the inspection and calibration of monitoring equipment;

(e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the *District Manager* ; and

(f) procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

(3) The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works* . Upon request, the *Owner* shall make the manual available to *Ministry* staff.

(4) The *Owner* shall provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

9. DISCHARGE SEASON

(1) The Owner shall operate the *Works* such that discharge is conducted on a semi-annual discharge basis with the effluent being discharged in the spring and the fall as follows:

spring: discharge commencing no earlier than May 1 and terminating no later than June 30, and

fall: discharge commencing no earlier than September 30 and terminating no later than November 30.

10. MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the *Works* , carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Approval* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) For the purposes of this condition, the following definitions apply:

(a) 5 times per seasonal discharge means one sample each taken at the start of the discharge, at

25%, 50%, 75% of drawdown and at the end of the seasonal discharge;
 (b) Monthly means once every month.

(3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3 - Raw Sewage Monitoring		
Parameters	Sample Type	Frequency
<i>BOD5</i>	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly
Total Phosphorus	Grab	Monthly

Table 4 - Lagoon Content Monitoring One sample of the content in each lagoon cell at least seven days before scheduled seasonal discharge		
Parameters	Sample Type	Frequency
<i>CBOD5</i>	Grab	Once prior to seasonal discharge
Total Suspended Solids	Grab	Once prior to seasonal discharge
Hydrogen Sulphide	Grab	Once prior to seasonal discharge
<i>E. Coli</i>	Grab	Once prior to seasonal discharge

Table 5 - Effluent Monitoring Effluent from the effluent pumping station		
Parameters	Sample Type	Frequency
<i>CBOD5</i>	Grab	5 times per seasonal discharge
Total Suspended Solids	Grab	5 times per seasonal discharge
Total Ammonia Nitrogen	Grab	5 times per seasonal discharge
Total Phosphorus	Grab	5 times per seasonal discharge
<i>E. Coli</i>	Grab	5 times per seasonal discharge
pH	Grab	5 times per seasonal discharge

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

(a) the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal

Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions; and,

(5) The *Owner* shall install and maintain (a) continuous flow measuring device(s), to measure the flowrate of the influent to the *Works* with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flowrate for the entire design range of the flow measuring device, and record the flowrate at a daily frequency.

(6) The *Owner* shall measure and record the flowrate of the effluent from the *Works* during a discharge period with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flowrate, and record the quantity of effluent discharged on a daily basis.

11. REPORTING

(1) Ten (10) days prior to the date of a planned *By-pass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *By-pass*, the *Owner* shall notify the *District Manager* (in writing) of the pending start date, in addition to an assessment of the potential adverse effects on the environment and the duration of the *By-pass*.

(2) The *Owner* shall report to the *District Manager* or designate, any exceedance of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within seven (7) days after the laboratory results of the exceedance have been received.

(3) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *District Manager* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(4) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

(5) The *Owner* shall prepare, and submit to the *District Manager* a performance report, on an annual *Operating Period*, within ninety (90) days following the end of the period being reported upon. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the *Works* ;

(b) a description of any operating problems encountered and corrective actions taken;

- (c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works* ;
- (d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- (e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and
- (f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.
- (g) a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;
- (h) a summary of any complaints received during the reporting period and any steps taken to address the complaints; and
- (i) a summary of all *By-pass* , spill or abnormal discharge events.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Approval* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this *Approval* the existence of this *Approval* .
2. Condition 2 is included to ensure that the *Works* are constructed in a timely manner so that standards applicable at the time of Approval of the *Works* are still applicable at the time of construction, to ensure the ongoing protection of the environment.
3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the *Works* are made aware of the *Approval* and continue to operate the *Works* in compliance with it.
4. Condition 4 is included to ensure record drawings of the *Works* “as constructed” are maintained for future references.
5. Condition 5 is included to indicate that by-passes of untreated sewage to the receiving watercourse is prohibited, save in certain limited circumstances where the failure to *By-pass* could result in greater injury to the public interest than the *By-pass* itself where a *By-pass* will not violate the approved effluent requirements, or where the *By-pass* can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. The notification and documentation requirements allow the *Ministry* to take action in an informed manner and will ensure the *Owner* is aware of the

extent and frequency of *By-pass* events.

6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 7 are exceeded.
7. Condition 7 is imposed to ensure that the effluent discharged from the *Works* to the environment meets the *Ministry*'s effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving water body.
8. Condition 8 is included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the *Ministry*. Such a manual is an integral part of the operation of the *Works*. Its compilation and use should assist the *Owner* in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for *Ministry* staff when reviewing the *Owner*'s operation of the work.
9. Condition 9 is included to ensure that the treated effluent is discharged to the receiver during periods and at rates that minimizes the environmental impact on the receiver.
10. Condition 10 is included to enable the *Owner* to evaluate and demonstrate the performance of the *Works*, on a continual basis, so that the *Works* are properly operated and maintained at a level which is consistent with the design objectives and effluent limits specified in the *Approval* and that the *Works* does not cause any impairment to the receiving watercourse.
11. Condition 11 is included to provide a performance record for future references, to ensure that the *Ministry* is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this *Approval*, so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.

Schedule A

1. Amendment to the Environmental Study Report for the Moosonee Development Area Board dated September 1999 prepared by The LeBrun Water Resources Group, subsequent revised submission submitted by The LeBrun Water Resources Group dated December 17, 1999;
2. Final submission marked Issued For Construction dated September 02, 1999 and forcemain relocation drawings dated May 08, 2000 prepared by Reid Crowther, Consulting Engineers;
3. Application for Approval of Sewage Works submitted by Greg Ford of exp Services Inc. received on May 24, 2012 for the modifications in discharge period and monitoring requirements.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
3-1171-99-006 issued on March 12, 1999.**

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

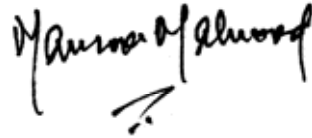
AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 25th day of July, 2012



Mansoor Mahmood, P.Eng.

Director

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

FL/

c: District Manager, MOE Timmins
Water Standards Section, MOE Standards Development Branch
Greg Ford, exp Services Inc.

ENVIRONMENTAL COMPLIANCE APPROVALNUMBER 2598-9DMU34
Issue Date: December 18, 2013

The Corporation of the Town of Moosonee
Post Office Box, No. 727
Moosonee, Ontario
P0L 1Y0

Site Location: Healing Lodge Lift Station -100 Quarry Road &
Airport Lift Station - 1 Airport Road
Town of Moosonee, District of Cochrane

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the upgrades to the existing Moosonee communal sewage collection/conveyance systems located in the Town of Moosonee, District of Cochrane as follows;

Airport Lift Station

decommission the existing Airport Lift Station and replace by a new 1800 mm diameter precast concrete lift station equipped with, two identical Xylem (Flygt) pumps (Model NP-3102), one for duty and one for standby, each capable of handling 8.4 L/s at a total dynamic head (TDH) of 14.7 m, complete with a new control panel, alarm systems, lifting rails with all other appurtenances necessary to have a complete and operable pumping station; discharging via a 100 mm diameter existing forcemain to the existing sanitary manhole # E5 located on Mistik Blvd;

Sagashtawao Healing Lodge Lift Station

decommission the existing Sagashtawao Healing Lodge Lift Station and replace by a new prefabricated and pre-plumbed, 914 mm diameter fiberglass lift station equipped with, two identical Xylem (Flygt) pumps (Model CP-3068), one for duty and one for standby, each capable of handling 2.8 L/s at a total dynamic head (TDH) of 14.5 m, complete with a new control panel, alarm systems, lifting rails with all other appurtenances necessary to have a complete and operable pumping station; discharging via a 75 mm diameter existing forcemain to the existing sanitary manhole # 39 located on Pisew Street;

all in accordance with the application dated September 4, 2013 and received on September 16, 2013, including the design report, final plans and specifications prepared by exp Services Inc.

For the purpose of this environmental compliance approval, the following definitions apply:

1. *"Approval"* means this Environmental Compliance Approval and any Schedules to it, including the application and supporting documentation;
2. *"Ministry"* means the Ontario Ministry of the Environment;
3. *"Director"* means any Ministry employee appointed by the Minister pursuant to section 5 of the Part II.1 of the Environmental Protection Act;
4. *"Regional Water Compliance Manager"* means the Regional Water Compliance Manager of the appropriate Regional office of the Safe Drinking Water Branch of the Ministry, where the Works are geographically located;
5. *"District Manager"* means the District Manager of the appropriate local district office of the Ministry, where the Works are geographically located;
6. *"Water Supervisor"* means the Water Supervisor of the appropriate local office of the Safe Drinking Water Branch of the Ministry, where the Works are geographically located;
7. *"Owner"* means Town of Moosonee, and includes its successors and assignees;
8. *"Works"* means the sewage works described in the *Owner* 's application, this *Approval* and in the supporting documentation referred to herein, to the extent approved by this *Approval*;
9. *"Interim Works"* means the works to be used for short-term purposes only and will be for no more than five (5) years from the date of issuance of this *Approval*, until otherwise approval for an extension of this period has been granted;
10. *"Substantial Completion"* has the same meaning as *"substantial performance "* in the Construction Lien Act.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

- 1.1 The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Approval* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

- 1.2 Except as otherwise provided by these Conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval* , the application for approval of the *Works* and the submitted supporting documents and plans and specifications as listed in this *Approval* .
- 1.3 Where there is a conflict between a provision of any submitted document referred to in this *Approval* and the Conditions of this *Approval* , the Conditions in this *Approval* shall take precedence, and where there is a conflict between the listed submitted documents, the document bearing the most recent date shall prevail.
- 1.4 Where there is a conflict between the listed submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- 1.5 The requirements of this *Approval* are severable. If any requirement of this *Approval* , or the application of any requirement of this *Approval* to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this *Approval* shall not be affected thereby.

2. EXPIRY OF APPROVAL

- 2.1 This *Approval* will cease to apply to those parts of the *Works* which have not been constructed within five (5) years of the date of this *Approval*.
- 2.2 This *Approval* will cease to apply to the *Interim* Works as of August 31, 2018 until otherwise approval for an extension of this date has been granted. If an approval of such an extension has not been granted, then in such a case the *Owner* shall submit a written report to the *District Manager* by December 31, 2017 outlining the procedures or plans on how the *Interim Works* will be decommissioned by the expiry date.

3. CHANGE OF OWNER

- 3.1 The *Owner* shall notify the *District Manager* and the *Director*, in writing, of any of the following changes within thirty (30) days of the change occurring:
 - (a) change of *Owner*;
 - (b) change of address of the *Owner*;
 - (c) change of partners where the *Owner* is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the *District Manager*;
 - (d) change of name of the corporation where the *Owner* is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the *District Manager*.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

- 4.1 Upon the *Substantial Completion* of the *Works*, the Owner shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this *Approval*, and upon request, shall make the written statement available for inspection by *Ministry* personnel.
- 4.2 Within one year of the *Substantial Completion* of the *Works*, a set of as-built drawings showing the works “as constructed” shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the *Works* for the operational life of the *Works*.

5. OPERATION AND MAINTENANCE

- 5.1 The *Owner* shall exercise due diligence in ensuring that, at all times, the *Works* and the related equipment and appurtenances used to achieve compliance with this *Approval* are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this *Approval* and the *Act* and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the *Works*.
- 5.2 The *Owner* shall prepare an operations manual within six (6) months of *Substantial Completion* of the *Works*, that includes, but not necessarily limited to, the following information:
- (a) operating procedures for routine operation of the *Works* ;
 - (b) inspection programs, including frequency of inspection, for the *Works* and the methods or tests employed to detect when maintenance is necessary;
 - (c) repair and maintenance programs, including the frequency of repair and maintenance for the *Works* ;
 - (d) procedures for the inspection and calibration of monitoring equipment;
 - (e) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the *Water Supervisor*; and
 - (f) procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
- 5.3 The *Owner* shall maintain the operations manual current and retain a copy at the location of the *Works* for the operational life of the *Works*. Upon request, the *Owner* shall make the manual available to *Ministry* staff.

6. RECORD KEEPING

The *Owner* shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation and maintenance activities required by this *Approval*.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which *Approval* was granted. This Condition is also included to emphasize the precedence of Conditions in the *Approval* and the practice that the *Approval* is based on the most current document, if several conflicting documents are submitted for review. The Condition also advises the *Owners* their responsibility to notify any person they authorized to carry out work pursuant to this *Approval* the existence of this *Approval*.
2. Condition 2 is included to ensure that, when the *Works* are constructed, the *Works* will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment. 2. Condition 2.2 is included to require that the approved *Interim Works*, are properly operated, maintained and decommissioned as per original plans of the *Owner*.
3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to approved *Works* and to ensure that subsequent *owners* of the *Works* are made aware of the *Approval* and continue to operate the *Works* in compliance with it.
4. Condition 4 is included to ensure that the *Works* are constructed in accordance with the approval and that record drawings of the *Works* "as constructed" are maintained for future references.
5. Condition 5 is included to require that the *Works* be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the *Owner* and made available to the *Ministry*. Such a manual is an integral part of the operation of the *Works*. Its compilation and use should assist the *Owner* in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for *Ministry* staff when reviewing the *Owner's* operation of the *Works*.
6. Condition 6 is included to require that all records are retained for a sufficient time period to adequately evaluate the long-term operation and maintenance of the *Works*.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

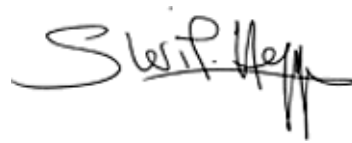
AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 314-3717 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 18th day of December, 2013



Sherif Hegazy, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

SN/

c: DWMD Supervisor, MOE Timmins
District Manager, MOE Timmins
H. James Hawken, P.Eng., exp Services Inc.