

## Water License 3BM-COR1521 Renewal and Amendment Application: Supplemental Information

Government of Nunavut

## Community and Government Services

September 29, 2021

The Municipality of Coral Harbour is applying to renew and amend the 3BM-COR1521. Initially a Type B application was submitted but Nunavut Water Board identified that the license would need to be upgraded to a Type A. All water and waste operations remain the same however the previous Type B license was based on daily potable water consumption. The new Type A license will reflect that Coral Harbour relies on a raw water reservoir that must be resupplied annually from Post River at a rate that exceeds the Type B limit of 300 m<sup>3</sup>/d to ensure sufficient drinking water is available throughout the year. In addition to this change, the licensee is requesting the modification or removal of previous requirements that are no longer relevant or practical. The following table will provide justification on the requested license amendments.

## Amendment Justification

Item	Request	Justification																										
Licence term	10 years	There is no change in municipal operations and water use is not expected to increase beyond the current annual limit within the next 10 years, based on population projections.																										
Quantity of water use not to exceed - Annum	No Change, 45,000 m³/yr	<p>It is expected that 45,000 m³ will be sufficient to supply the municipality until at least 2031.</p> <p>In 2020 a volume of 39,973 m³ was pumped into the reservoirs over a 24-day period. The current 2-cell reservoir has a 49,500 m3 capacity assuming 1 m freeboard is maintained.</p> <p>Potable water consumption for the licence period is reported in the table below:</p> <table><tr><th>Year</th><th>Potable Water Consumption (m³)</th></tr><tr><td>2015</td><td>40,702</td></tr><tr><td>2016</td><td>38,206</td></tr><tr><td>2017</td><td>37,935</td></tr><tr><td>2018</td><td>35,390</td></tr><tr><td>2019</td><td>32,075</td></tr><tr><td>2020</td><td>35,730</td></tr></table> <p>For the population and consumption projections, please see the table below:</p> <table><tr><th>Parameter</th><th>Value</th></tr><tr><td>Growth rate since 2011 (%)*</td><td>6.8</td></tr><tr><td>2016 Population*</td><td>891</td></tr><tr><td>Projected 2031 Population</td><td>1085</td></tr><tr><td>Consumption Rate (L/d/capita)**</td><td>110</td></tr><tr><td>2031 Consumption (m³)</td><td>43,579</td></tr></table> <p>*Statistics Canada</p> <p>**Government of the Northwest Territories</p>	Year	Potable Water Consumption (m³)	2015	40,702	2016	38,206	2017	37,935	2018	35,390	2019	32,075	2020	35,730	Parameter	Value	Growth rate since 2011 (%)*	6.8	2016 Population*	891	Projected 2031 Population	1085	Consumption Rate (L/d/capita)**	110	2031 Consumption (m³)	43,579
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Quantity of water use not to exceed - Daily	Increase to 2,000 m <sup>3</sup> /d	<p>The previous Type B licence had a maximum daily withdrawal rate of 299 m<sup>3</sup>/d based on potable water consumption by the municipality. The new Type A licence will reflect the annual resupply of the raw drinking water reservoir during the ice-free season. There is no change to the resupply operations at Post River, which have been in place since the first cell of the reservoir was constructed in 1980.</p> <p>The <i>Desktop Risk Assessment on the Sustainability of Nunavut's Primary Drinking Water Sources</i> report (Centre for Water Resources Studies, Dalhousie University, 2016) concluded that if Post River is fish bearing, daily withdrawal may be pumped at a rate up to 87,161 m<sup>3</sup>/d without having a detectable impact on the ecosystem based on the Fisheries and Oceans Canada requirements. The <i>Nunavut Coastal Resource Inventory</i> (Government of Nunavut, 2012) indicates that fish may be found within Post River. Therefore, it is determined that the rate of 2,000 m<sup>3</sup>/d is well below the maximum withdrawal rate, and is not anticipated to have any detrimental impact on the ecosystem.</p> <p>Most important to note, is that this system has been functioning in this manner for over 30 years.</p>
Daily Reporting of Waste	Remove this requirement	<p>Wastewater is recorded and reported as equal to potable water consumption in monthly quantities.</p> <p>There is currently no solid waste attendant position funded in the municipal budget to support daily solid waste recording.</p>
Submission of paper copies of reports	Remove this requirement	The licensee requests that only electronic copies be required for report submissions.
Sludge Management Plan	Include in the Sewage Disposal OM Plan	The licensee has included sludge management in the new Sewage Disposal Facility 2021 Operations and Maintenance Plan
Engineer's inspection report submitted within 60-days of an inspection that must take place in July or August	Include all inspection reports in the annual report and remove the 60-day submission requirement	The Licensee is requesting that the annual report and CIRNAC report to be sufficient to meet this requirement. The annual report is submitted early in the following year, once all the data is collected, which is after 60-days from August. The annual report will outline the plan to address any of the identified issues during any inspections and include the CGS Regional Municipal Engineer's recommendations. An engineer cannot always be present during CIRNAC inspections, the municipal technical officer may stand in, but an engineer will be on site at least once a year and review all inspection reports.
A geotechnical engineers report must be submitted within 60-days of an inspection	Remove the 60-day submission requirement	Final reports typically take longer than 60-days to be submitted by a consultant and reviewed by the CGS technical team. The licensee requests that the submission timeline be adjusted to 60 days after the final report is submitted by the consultant or to be included with the annual report.

Decommissioning Report for a legacy waste site near the airport	Remove this from the licence	CIRNAC has indicated that this remediation project is being undertaken by the federal contaminated sites department.
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