Reviewer Comments and Proponent Responses

Project: Great Bear Lake Lodge Ltd
Board: Sahtu Land and Water Board
Organization: Great Bear Lake Lodge Ltd.

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Sahtu Renewable Resources Board - Colin Macdonald				
1	Scope	Request for the renewal of Water License S19L34-001 for Great Bear Lake Lodge on the Dease Arm of Great Bear Lake. The proponent indicates that there have been no substantive changes in water use since the last license was issued in 2019. They request that the operation be exempt from preliminary screening as there have been no changes since S12L3-002. A water license application has been made to the Sahtu Land and Water Board.The application includes documentation required by the SLWB but there is no Traditional Knowledge Study, as outlined in the Application form.	Although it does not appear to be a requirement in the application, is there an independent assessment or inspection to confirm that there have been no significant changes in operation since 2019 or since the original licence in 2012? The facilities are several decades old. Is there a process to inspect the operation for evidence of significant changes or deterioration of facilities (e.g., fuel storage).	The Resource Inspectors complete an inspection of the operation annually to ensure that the operation is in compliance with the requirements of the water licence and lease. Additionally, a third pary assessment was completed by Matrix Solutions Inc. on all of the fuel storage facilities on the site and is availble in the 2022 Annual Report. All fuel tanks are registered and in good condition according to the inspections and third party report.
2	Scope	The application is for continued operation of a facility for >50 persons under municipal regulations. The request is for obtaining water and depositing waste to a solid waste site or a gravel filtration field. The only other user of significant amounts of water on Great Bear is the community of Deline, which is across the lake. Has there been an inspection of the facilities to ensure that solid waste is handled appropriately and that the gravel filtration is working as designed? Is the gravel bed a source of nutrients to the lake, especially during spring melt and rainstorms? (There are no data from an SNP in the application reports). Are fuel storage tanks still in good condition and are spills handled appropriately? Is the incineration of solid waste conducted appropriately?	These issues need to be better addressed in the application process before the renewal can be supported.	An inspection is completed by the Resource Inspectors annually to ensure compliance with the terms of the licence. One of the SNP monitoring station locations that is sampled twice per season and reported in the annual reports is located down gradient of the gravel filtration field. The issues that are raised in this comment and recommendation are adequately addressed.
3	Scope	No Traditional Knowledge Study has been completed and no report has been submitted as part of the application	As mentioned above, if a traditional knowledge study is requested (as outlined in the application form) then this condition should be part of the conditions for the new licence. The Engagement log indicates some discussions may have taken place with Deline but the TK study does not appear to have advanced significantly.	Great Bear Lake Lodge Ltd. has attempted and will continue attempts to coordinate a traditional Knowledge study to be completed. Great Bear Lake Lodge Ltd. looks forward to communicating further with Deline to coordinate the completion of a study when convenient for them.
4	Waste ManagementPlan	"The Lodge has been in operation at its current location since 1968 with no negative effect on the surrounding environment or neighbouring community."	This statement should be removed or modified since there are no studies to support it. It's unlikely that the Lodge was constructed without impacts to the local environment, including the nearshore environment in the Lake. Water-based aircraft, an airstrip for large aircraft, a 3-km road and barging have all probably impacted the local environment, although how much will not be known without studies before and after construction and operation.	Acknowledged.

5	Waste ManagementPlan	Ash is spread around the site. Are the results of this analysis available? What is the mass of ash that is distributed?	Provide more data on the ash remaining from the incineration over the tourist season.	The ash is tested at a lab in Yellowknife before dispersal on-site. The volume of ash is summarized in the annual reports. Upon approval, the ash is buried with the septic waste by the gravel filtration field.
6	Waste ManagementPlan	Grey water and sewage disposal isn't clear. Grey water is disposed in the gravel field but there are septic tanks too. Which is it? Sewage is treated in septic tanks and the solids buried. Is the ground around the burial area monitored?	Given the sensitivity of Bear Lake to the addition of nutrients, this sewage system should be inspected and tests done to ensure that there is no input from the septic field to the Lake. (200 feet from the lake is mentioned in one place and 200 m in another).	An inspection is completed by the Resource Inspectors annually to ensure compliance with the terms of the licence and the lease and to ensure that the sewage facilities comply. One of the SNP monitoring station locations that is sampled twice per season and reported in the annual reports is located down gradient of the cobble leech field.
7	Interim Closure and Reclamation Plan	*"To return the [project] site and affected areas to viable, and wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities."* This plan is very general, with no details of the amount of material that would have to be used, whether Deline is OK with material being shipped through them and what the end state of the area will look like. If the proponent goes bankrupt, it is unlikely that these objectives can be accomplished with the $20,000 deposit given the expense of working in the north and the size of the operation (airstrip, septic beds, infrastructure, etc.) The cost of removing, transporting all the infrastructure, equipment and materials and modifying the site to allow natural regeneration will presumably be in the millions, although it is not costed out here. The plan is very general in nature.	More details on cost and timing need to be provided here. Section 7 suggests that it will take 2 summer seasons and a winter to conduct reclamation activities. That would be difficult to do if the company has financial issues or just decides to close.	Acknowledged.
8	Draft Licence Conditions	The draft condition recommends 2 water samples to be collected; the end of July and the end of August. This is probably the absolute miimum and there is a chance that the sample might miss water quality issues. Given the extent of the operation (e.g., airstrip, floatbase/marina, large footprint of infrastructure) the two water samples won't identify potential sources of contamination, such as hydrocarbons, to the lake.	A more rigorous program that requires sampling for hydrocarbons around the float base/marina and near the airstrip needs to be conducted at some point. The camp has been operating for decades and nearshore effects to water quality are likely. A more extensive water sampling program would also help to define what is required in the Closure/ Reclamation Program.	Acknowledged.
9	Engagement Plan	"*The requirement for proponents to initiate dialogue and engagement planning with affected parties, including particular Aboriginal organizations and groups;"* The engagement Plan follows the guidelines in terms of the need for engagement and when it is required. The Engagement log lists 35 interactions with people in the Sahtu since 2019. Most of the interactions appear to be initiated by outside parties and very few initiated by Great Bear Lake Lodge.	The SLWB needs to determine whether these interactions, most by e-mail, are enough to fulfill the engagement responsibility.	Acknowledged.
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Fisheries and Oceans Canada (DFO) - Ms. Anna-Maija LaFlamme				

1	Great Bear Lake Lodge Ltd: Water Licence Renewal	The Great Bear Lake Lodge Ltd: Water Licence Renewal documents discuss the mitigation measures that will be implemented to protect fish and fish habitat throughout the project. DFO acknowledges that the project are using screened water intakes in accordance with the DFO's Interim Code of Practice for end-of-pipe fish screens for small-scale water intakes. DFO recommends that the project defines the water intake rate within the documents.	Based on the information that was outlined within the Great Bear Lake Lodge Ltd: Water Licence Renewal (S24L3-001), DFO requests the proponent to provide the water intake flow rate that will be utilized for the water withdrawal. As per Interim Code of Practice for end-of-pipe fish screens, water withdrawal for small-scale water intakes, the water intake flow rate is up to 0.150 m3 /s, or 150 liters per second (L/s).	Acknowledged.
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Transport Canada - Mr. Scott Kidd				
1	**Topic:** Preliminary Screening: Water License Application Box 6	Great Bear Lake Lodge wants to continue to withdraw water from Great Bear Lake (Dease Arm) to supply the lodge. The Proponent has confirmed for Transport Canada that water withdrawals for the lodge will be done using an existing water intake and pipeline. For the information of the Sahtu Land and Water Board (Sahtu LWB) and the Proponent, works, such as pipelines and water intakes, in, on, over, under, through or across navigable waters are regulated under the *Canadian Navigable Waters Act* (CNWA). A work's possible impacts to navigation and corresponding requirements under the CNWA are dependent upon the type of waterway and the type of work being undertaken. Great Bear Lake is listed in the CNWA Schedule of Navigable Waters. Given the limited details about the existing pipeline and water intake, Transport Canada cannot comment definitively on the Project's impacts on navigation. However, as Great Bear Lake is a CNWA scheduled waterway, any construction or placement of a new pipeline and water intake, or alteration, rebuilding, removal or decommissioning of the existing pipeline and water intake, would require an approval under the CNWA. The exception to this would be if the work meets the criteria for water intakes set out in the CNWA Minor Works Order. For clarity, all CNWA minor works, regardless of their location, do not require a CNWA approval.	It is recommended the Proponent review the *Works on navigable waters in Canada* (https://tc.canada.ca/en/programs/navigation-protection-program/works-navigable-waters-canada) webpage and Transport Canada's Navigation Protection Program on-line Project Review Tool (https://npp-submissions-demandes-ppn.tc.canada.ca/projectreview-outildexamenduprojet) to better understand the applicability of the CNWA to the Project.	Acknowledged.
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GNWT - Environment and Climate Change - Environmental Regulatory Analyst				
1	**GNWT-ECC Cover Letter**	The Department of Environment and Climate Change, Government of the Northwest Territories has reviewed the application at reference based on its mandated responsibilities under the *Waters Act* and has provided comments and recommendations for consideration of the Sahtu Land and Water Board. For any technical questions, please contact Lee Ross, Regulatory and Science Advisor with the Regulatory and Permitting Division at Lee_Ross@gov.nt.ca, and Erin Goose, Water Resource Offer with the Sahtu region at Erin_Goose@gov.nt.ca. Should you have any general questions or concerns, please do not hesitate to contact gnwt_ea@gov.nt.ca.	N/A	
2	**Spill Contingency Plan, Page 1. Section 1.2**	The Distribution list has Laurel McDonald as the Water Resource Officer. Laurel's title is the Manager of Wildlife and Environment.	GNWT-ECC recommends updating the contact name of the Water Resource Officer to Erin Goose.	Acknowledged.

3	**Spill Contingency plan Figure 2. Detailed site map**	The figure 2. Has a picture showing the location of the Fuel that is stored, this location seems to be less than 40 meters or 100 feet from the Ordinary High Water Mark.	GNWT-ECC recommends relocation of the fuel storage to an area that is in compliance. The Licensee shall not establish any fuel storage facilities or refueling stations, or store chemicals or wastes within 100 meters of the Ordinary High-Water Mark of any Watercourse. Please refer to the Standard Water Licence Conditions, Part H: Spill Contingency Planning, Section 7. https://mvlwb.com/sites/default/files/2023-02/Standard%20Water%20Licence%20Conditions%20and%20Schedules%20-%20Version%202.1%20-%20Feb%202023.pdf	Great Bear Lake Lodge Ltd. has completed a third-party report supporting an exemption to the fuel storage distances and would like the results to be addressed on record officially supporting this exemption in the licence and subsequent inspection reports.
4	**1.10 Process for Staff Responses to Media and Public Inquiries**	If a spill has occurred, an NWT Spill Report needs to be filled out (see Appendix B). This information is available for the public to view upon request by contacting the NWT Spill Line or by viewing the GNWT Hazardous Materials Spills Database online at https://www.gov.nt.ca/ecc/sites/ecc/files/resources/spill_report_form_e_fillable.pdf	GNWT-ECC recommends updating the link to one that works.	Acknowledged.
5	**Waste Management Plan, 1 INTRODUCTION, 4 DESCRIPTION OF WASTE MANAGEMENT**	All non-hazardous waste generated by the Lodge is either incinerated as per the existing water license or transported to Yellowknife for appropriate disposal. 4 DESCRIPTION OF WASTE MANAGEMENT Items suitable for burning in an approved incinerator (e.g. paper, cardboard, untreated wood) are separated from all recycling (e.g. plastics and cans) All paper, cardboard and untreated wood are burned in an incinerator. Once per year, the ash is deposited throughout the site. To ensure that proper waste segregation occurs before incineration, a composite ash sample is collected and tested in an approved laboratory before annual dispersal. Composite ash samples will consist of collecting equal quantities of ash following each use of the incinerator.	Operational requirements that should allow batch incinerators to meet the intent of the Canada-wide Standards for dioxins/furans and mercury, and to reduce the release of other toxic substances and recommendations on record keeping and reporting (Environment Canada 2010-Technical document for Batch waste incineration: Executive summary and overview of the six-step process for Batch waste incineration) https://publications.gc.ca/collections/collection_2010/ec/En14-17-2-2010-eng.pdf GNWT-ECC recommends the GPS locations are where the ash is buried.	Acknowledged.
6	**4 DESCRIPTION OF WASTE MANAGEMENT**	All greywater and sewage wastes flow to three septic tanks; two have 1000-gallon capacities, the other holds 500 gallons. Four cabins drain to the small tank and the larger tanks service the remaining buildings. Liquid wastes are pumped almost a kilometer east of the Lodge to a gravel filtration field where they disperse into the soil.	In 7 APPENDIX A – WASTE MANAGEMENT FACILITIES LOCATIONS it indicates an actual waste line for the greywater and sewage is pumped from the tanks to the gravel filtration field. In the MVLWB Guidelines for developing a waste management plan, section 3.3 section (b) For any infrastructure required for waste management, an engineering design report with any supporting engineered drawings that accounts for all life stages of the infrastructure, from construction and operation to closure and decommissioning. Where applicable, the infrastructure design report is to include details of construction specifications and QA/QC requirements, as well as proposed monitoring requirements for each life stage of the infrastructure. https://mvlwb.com/sites/default/files/documents/MVLWB-Guidelines-for-Developing-a-Waste-Management-Plan-Mar-31_11-JCWG.pdf Due to the close proximity of the grey water and sewage gathering system to the lake shore and no sewage/pump truck listed within the Spill contingency plan section 4 RESOURCE INVENTORY 4.1 On-Site Resources, GNWT-ECC recommends that it be made clear in an engineered drawing and	The line running from the septic tanks to the field is for greywater only. Sewage solids are removed after the season or as needed using a truck and trailer unit. Great Bear Lake Lodge Ltd. does not agree with the recommendation that engineered drawings are necessary. These lines are inspected daily by staff and annually by the resource officers.

7	**4 DESCRIPTION OF WASTE MANAGEMENT**	The camp manager frequently adds Septo Bac to the tanks, which help to further decompose the solids. The septic tanks are completely pumped out at the end of each operating year and the solids are buried in a pit east of the filtration field.	GNWT-ECC recommends GPS coordinates of the solids being buried to be added on to 7 APPENDIX A – WASTE MANAGEMENT FACILITIES LOCATIONS	Acknowledged.
8	**7 APPENDIX A – WASTE MANAGEMENT FACILITIES LOCATIONS**	5 GRAVEL FILTRATION FIELD The gravel filtration field is located 200 feet from the shoreline and approximately 75 feet elevated from the water level. The dimension of the field is 15 feet wide by 30 feet long by 8 feet deep. All greywater produced by the lodge and its occupants is pumped into it after being separated by the holding tanks.	The location of the gravel filtration field in the photo looks to be more than 200 feet from the shoreline. GNWT-ECC recommends to have the actual GPS coordinates of the Gravel Filtration field to be added to the 7 APPENDIX A – WASTE MANAGEMENT FACILITIES LOCATIONS.	Acknowledged.
9	**Spill Contingency Plan 1.8 Existing Preventative Measures 1.7 List of Hazardous Materials On-Site 3.1 Potential Spill Sizes and Sources for Each Hazardous Material on Site 3.2 Potential Environmental Impacts of Spill**	Spill kits are located wherever fuel is stored or used (see Figures 2-3). See Section 4.1 for details on spill kit contents. Portable drip trays and appropriately sized fuel transfer hoses with pumps are used when refueling ATVs, or other motorized equipment, to avoid any leaks/drips onto the land. The camp manager or designated fuel monitor conducts daily visual inspections to check for leaks or damage to the fuel storage containers/lines, as well as for stained or discolored soils around the fuel storage areas/lines and adjacent motorized equipment. For example, lids/caps are checked for tight seals. Regular maintenance and oil checks of all motorized equipment are also undertaken to avoid preventable leaks. In Table 2, a list of potential discharge events, with associated discharge volumes and directions is presented for the primary hazardous materials stored on site.	Due to the close proximity of the sewage/greywater distribution lines and holding tanks to the shoreline, GNWT-ECC recommends Raw Sewage to be added to the Spill contingency plan in section 1.8, 1.7, 3.1 and 3.2.	Acknowledged.
10	**Draft Licence Conditions – Fuel Storage**	The Government of the Northwest Territories, Department of Environment and Climate Change (GNWT-ECC) notes that Part G, Condition 8, of the current Water Licence (S19L3-001) states "The Licensee shall ensure all fuel storage facilities, refueling stations, and storage of chemical or deleterious substances are located greater than 30 metres from the Ordinary High Water Mark of any Watercourse, and shall make best efforts to relocate fuel storage facilities to greater than 100 metres from the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector." However, the Draft Water Licence (S24L3-001) proposed by Board staff does not have an equivalent condition regarding on-site fuel storage. GNWT-ECC notes that the Standard Water Licence Conditions Template (Version 2.1) provided by The Land and Water Boards of the Mackenzie Valley (LWBs) does include a condition regarding fuel storage and refueling stations (Part H, Condition 7) which states "The Licensee shall not establish any fuel storage facilities or refueling stations, or store chemicals or Wastes within 100 metres of the Ordinary High-Water Mark of any Watercourse." GNWT-ECC is concerned by the exclusion of a condition	GNWT-ECC recommends that the Board include the standard condition regarding fuel storage facilities and refueling stations, Part H, Condition 7 from the LWB's Standard Water Licence Conditions Template (Version 2.1) in the Water Licence for Great Bear Lake Lodge. GNWT would support the Board in using discretion when determining the buffer distance but maintains a minimum of 30 metres from water is required. Great Bear Lake Lodge should then work with the Regional Water Resource Officer to gain compliance with the condition.	Acknowledged.

11	**Closure And Reclamation Plan Version 4.0**	GNWT-ECC recommends that the Closure and Reclamation Plan (CRP) not be approved based on the limited information provided within the management plan. The CRP submitted by Great Bear Lake Lodge (GBLL) is a limited summary of closure and reclamation that may occur, and does not appear to take a realistic or fact-based approach to the actual activity of reclaiming the site. The estimated timeline proposed by GBLL is 12-14 months with no breakdown of activities. It is unclear as to how bulk construction debris would be removed from site, including the estimated number of loads, the expected means of transport (barge/winter road), and permitting that may be required (i.e. winter road). Where closure methods may not be confirmed, GBLL should provide closure options available. Further, Section 9 of GBLL's CRP states that GBLL is financially secure with a strong balance sheet and that money has been set aside to be used towards closure and reclamation costs, however it is unclear what GBLL estimates the closure and reclamation costs of the site to be and what percentage of that amount has been set aside to cover those costs. Security for the site has not been updated or fully assessed since 2019. An updated security estimate should be submitted to the Board for	The GNWT-ECC recommends that GBLL revise the Closure and Reclamation Plan to include expanded details, including actual schedules and proposed planning or options for closure and reclamation to inform an accurate cost of closure and reclamation. The GNWT-ECC recommends that GBLL revise the Closure and Reclamation Plan to acknowledge historical environmental liabilities at the site, regardless of previous ownership, which will be addressed in closure and reclamation. GNWT-ECC recommends that a revised RECLAIM security be provided and circulated for review by parties once a revised Closure and Reclamation Plan is submitted to the Board. GNWT-ECC suggests an updated plan and estimate should be submitted within 90 days of the Board's decision.	Great Bear Lake Lodge Ltd. can work to improve the Closure and Reclamation plan on a similar timeline to the annual report being due but does not agree with the recommendation to revise the security amount. There are no plans to stop operations at the lodge this season or in the future.