

## Reviewer Comments and Proponent Responses

**Project: Hamlet of Fort Liard municipal Licence – Sludge Management Plan Version 1.2**

**Board: Mackenzie Valley Land and Water Board**

**Organization: Hamlet of Fort Liard**

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response	Board Decision
<b>GNWT - Environment and Climate Change - Environmental Regulatory Analyst</b>					
1	GNWT-ECC Cover Letter	Please see attached.	N/A	NA	Noted.
2	Section 1.4 – Sludge Removal	Section 1.4 of the Sludge Management Plan (the Plan) states: “Prior to any lagoon draining or sludge removal, an Inspector must be informed at least ten days in advance”. Part D, Condition 11 of the Water Licence states: “The Licensee shall submit written notification to the Board and an Inspector sixty (60) days prior to the removal of sludge from the Sewage Disposal Facilities. Sludge removal shall not commence until authorized in writing by an Inspector.” The Government of the Northwest Territories (GNWT) Department of Environment and Climate Change (ECC) notes that the timing of these two requirements does not match.	GNWT-ECC recommends that Section 1.4 of the Plan be updated to reflect the timing of notification required in Part D, Condition 11 of the Water Licence.	Section 1.4 of the plan will be updated to reflect the timing of notification required in Part D, Condition 11 of the water license.	Acceptable response. The Board reminds the Hamlet of this revision in their letter.
3	Section 1.5 – Mackenzie Valley Land and Water Board	Section 1.5 of the Plan refers to the “Mackenzie Land and Water Board”. GNWT-ECC notes that this should be “Mackenzie Valley Land and Water Board”.	GNWT-ECC recommends that Section 1.5 of the Plan be updated to refer to the “Mackenzie Valley Land and Water Board”.	Section 1.5 of the plan will be updated to refer to the “Mackenzie Valley Land and Water Board”.	Acceptable response. The Board reminds the Hamlet of this revision in their letter.
4	Section 1.5 – Approval for Re-use	Section 1.5 of the Plan states: “A minimum of 10 days prior to the removal of sludge from the Sewage Disposal Facilities for re-use, the Hamlet shall submit analytical results and written notification to the Mackenzie Land and Water Board and an	GNWT-ECC recommends that Section 1.5 of the Plan be updated to indicate that approval will be obtained from the Inspector prior to re-use of sludge.	As per the city of Yellowknife and town of Hay River water licenses, the Hamlet of Fort Liard is asking the board to consider sludge removal notification. The board has	The Board notes that the Hamlet’s response is accurate, and reflects a precedent in the Board’s approach to municipal sludge management, where

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response	Board Decision
		Inspector.” GNWT-ECC notes that approval should be obtained from the Inspector prior to re-use of the sludge.		previously approved criteria in the desludging management plan.	approval is implicit in that the sludge has to meet testing criteria (in this case, outlined in the Sludge Management Plan) in order to be re-used, such that only notification to, not approval by, the Board and Inspector are required. The Board believes that it is operationally important that only Inspector notification is required prior to using sludge that meets the approved criteria; waiting for Board approval for the Hamlet to make use of the sludge for operational purposes would be difficult.
<b>Environment and Climate Change Canada (ECCC) - Eva Walker</b>					
1	Sludge management 1.Sewage Lagoon Desludging Plan Hamlet of Fort Liard (Dillon Consulting 2023) 2.Revision table from December 1, 2023, cover letter for the Sewage Lagoon Desludging	The proposed revision to the sludge management plan, as detailed in the accompanying revision table, removes the plan’s sole contingency measure to address potentially undertreated sludge, that is not suitable for re-use. The text removed included a statement that further treatment be required if analysis of (treated) sludge exceeds guidelines. Removing this contingency measure creates a gap in sludge management. It is unclear how treated sludge would be managed if it does not meet criteria. Additionally, although the updated text states that analytical results will be submitted, there is no indication whether comparisons to guidelines will be	ECCC recommends that the sludge management plan (i.e., Sewage Lagoon Desludging Plan) be updated to include the following information:  i. Methodology for collection of representative sludge samples, including sampling details (e.g., sample type, frequency, timing, locations, sample number and size relative to total volume of sludge) and quality assurance and quality control procedures.  ii. Sludge management contingency measures for the potential event	A minimum of 10 days prior to the removal of sludge from the Sewage Disposal Facilities for re-use, the Hamlet shall submit analytical results of the sludge sampling and provide written notification to the Mackenzie Land and Water Board and an Inspector. However, if the sludge analysis exceeds guidelines, further treatment of the sludge will be required.	The Board notes that the Hamlet has addressed items ii and iii in their response, but not item i.  With respect to sampling methodology (item i), the <i>CCME Guidance Document for the Beneficial Use of Municipal Biosolids, Municipal Sludge and Treated Sewage</i> (2012) that is appended to the Hamlet’s Sludge Management Plan does outline criteria and provide references for ensuring representative

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response	Board Decision
	Plan (Dillon Consulting Ltd.; email)	provided. This information is important to inform sludge management decisions. Additionally, tThe Sewage Lagoon Desludging Plan indicates that geotube containers will be used for the interim storage, de-watering and treatment of lagoon sludge. Per Section 1.5 (Sludge Disposal Method), following treatment the dried sludge will be sampled and sent to a lab for analysis in order to confirm that it meets the quality guidelines for landfill application. However, the plan provides no sampling details and no guidance to support the collection of representative sludge samples. Without such information, it is unclear whether adequate sampling will be conducted. In order to address these gaps, the plan should be updated to include contingency measures, sampling guidance, and provision of data comparison to guidelines.	that sludge does not meet guideline criteria for re-use.  iii. Clearly identify that the results of sludge analysis, including comparison to guidelines, will be submitted, prior to re-use.		sampling. The draft GNWT/LWB <i>Guidelines for Municipal Sludge Management for Passive Sewage Treatment Systems in the NWT</i> speaks to sludge re-use criteria and recommended parameters for analysis, but no recommended sampling methodology. The Board has not required exact sludge sampling methodology from other municipal licensees; the Board trusts that the Hamlet and its consultants will employ sound methods for the collection of sludge for quality analysis. The Board requires the Hamlet to revise Section 1.5 as stated in the response, and also to include submission of their sampling methodology along with the analytical results, with the notification of sludge removal for re-use, to the Board and an Inspector.
2	ECCC Cover Letter	ECCC Cover Letter	NA	NA	Noted.

Environmental Protection Operations Directorate  
Prairie & Northern Region  
5019 52<sup>nd</sup> Street, 4<sup>th</sup> Floor  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

ECCC File: 5200 000 026/002  
MVLWB File: MV2019L3-0007



December 14, 2023

via online review system

Erica Janes  
Regulatory Specialist  
Mackenzie Valley Land and Water Board  
7th Floor, 4922 48th Street  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

Dear Erica Janes:

**RE: MV2019L3-0007- Hamlet of Fort Liard – Municipal Water Licence – Sludge Management Plan V1.2**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Mackenzie Valley Land and Water Board (MVLWB) regarding the above mentioned plan.

Environment and Climate Change Canada (ECCC) provides expert information and knowledge to project assessments on subjects within the department's mandate, including climate change, air quality, water quality, biodiversity, environmental preparedness and emergencies. This work includes reviewing proponent characterization of environmental effects and mitigation measures, and providing advice to decision makers on activities needed to mitigate these environmental effects. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

If you need more information, please contact Eva Walker at (867) 444-0394 or [eva.walker@ec.gc.ca](mailto:eva.walker@ec.gc.ca).

Sincerely,

A handwritten signature in black ink, appearing to read 'E Walker'.

Eva Walker  
Senior Environmental Assessment Officer

cc: Melissa Pinto, Acting Head, Environmental Assessment North (NT and NU)





December 14, 2023

Erica Janes  
Regulatory Specialist  
Mackenzie Valley Land and Water Board  
4922 - 48th Street  
Yellowknife, NT X1A 2P6

Dear Erica Janes,

**Re: Hamlet of Fort Liard municipal Licence Sludge Management Plan V1.2 (MV2019L3-0007)**

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 included comments and recommendations for consideration of the Mackenzie Valley Land and Water Board.

For any technical questions, please contact Celena Hoeve, Regulatory Science Advisor with the Regulatory and Permitting Division at [Celena.Hoeve@gov.nt.ca](mailto:Celena.Hoeve@gov.nt.ca).

Should you have any questions or concerns, please do not hesitate to contact [gnwt\\_ea@gov.nt.ca](mailto:gnwt_ea@gov.nt.ca).

Sincerely,

Shakita Jensen  
Regulatory Analyst  
Department of Environment and Climate Change