

## Reviewer Comments and Proponent Responses

**Project: Hamlet of Fort McPherson - Municipal Renewal**  
**Board: Gwich'in Land and Water Board**  
**Organization: Hamlet of Fort McPherson**

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
GNWT-ENR - EAM (Environmental Assessment and Monitoring) - Environmental Regulatory Analyst				
1	GNWT-ECC Cover Letter	Please see attached.	N/A	
2	Wildfire break	<p>The Department of Environment and Climate Change (ECC) recognises that The Hamlet of Fort McPherson (The Hamlet) has removed trees and vegetation in the past to create a fire break between Fort McPherson and the local landfill.</p> <p>The Forestry division of GNWT-ECC is concerned this work was completed without the appropriate permits in place and that usable materials may have been disposed of.</p> <p>Notifying GNWT-ECC of these plans helps us understand changes made to landfills. These developments will also need to be captured in the Community Wildfire Protection Plan.</p>	<p>Notify GNWT-ECC's Manager of Forests Ernie Francis at Ernie_Francis@gov.nt.ca of any future vegetation removal to attain appropriate permits 5 working days before the work is to begin.</p>	
3	Burning	<p>In the past GNWT-ECC has gotten calls from the public reporting smoke as a fire when there was burning ongoing at the landfill. These occurrences can be reduced if The Hamlet calls GNWT-ECC.</p>	<p>Notify Manager of Forests Ernie Francis at Ernie_Francis@gov.nt.ca at least 24 hrs before doing any burning to reduce avoidable response action.</p>	
4	Control Public Access	<p>The landfill holds plenty of hazardous wastes and GNWT-ECC is concerned that these may contaminate the environment as there is no public control in place.</p>	<p>Plan to start locking the gates and plan to have a fence installed around the landfill.</p>	
5	Fencing	<p>GNWT-ECC is recommending all Waste Disposal Facilities to move towards the installation of fencing around landfills in order to reduce potential for human-wildlife conflicts (particularly bears) in the long term, and have better control of access and assist with prevention of windblown wastes.</p>	<p>Plan to include fencing around the landfill in future upgrades.</p>	
6	Hazardous Waste Storage	<p>Section 5. (2) of the Used Oil and Waste Fuel Management Regulations states that</p> <p>A person storing used oil, waste derived fuel or waste fuel in a container shall ensure that the container (a) can be individually inspected and removed as necessary; (b) is tightly closed, stored, handled and maintained so as to prevent a leak or spill from the container or damage to or deterioration of the container; (c) is stored on a site where access is controlled and monitored; and (d) is clearly, legibly and indelibly labelled to indicate that its contents are waste used oil, waste derived fuel</p>	<p>Become familiar with and follow the Used Oil and Waste Fuel Management Regulations.</p>	

		el or waste fuel, as the case may be.		
7	Definitions - Construction	The definition of construction provided in the Draft Licence is “any activities undertaken during any phase of the Project to construct or build any structures, facilities or components of, or associated with, the development of the Project.” The Government of the Northwest Territories (GNWT) Department of Environment and Climate Change (ECC) notes that the standard definition of construction is “any activities undertaken during any phase of the Project to construct, build, upgrade, or replace any structures, facilities, or components of, or associated with, the Project” (LWB, 2023).	GNWT-ECC recommends that the standard definition of construction be included in Water Licence G23L3-001.	
8	Schedule 1 - Lettering	GNWT-ECC notes that Schedule 1 contains an unlettered condition requiring “A summary of any updates or revisions to the Spill Contingency Plan, Engagement Plan, and/or Operation and Maintenance Plans, conducted under the Annual Review referred to in Part B Condition 9” between Conditions 1j) and 1k).	GNWT-ECC recommends that the lettering in Schedule 1 be revised to ensure that all conditions have a corresponding letter.	
9	Sampling Frequency	The sampling frequency for Surveillance Network Program (SNP) station 1696-2 is listed as “A minimum of four times per decant”. GNWT-ECC notes that the sampling frequency does not contain any restrictions on timing. In order to ensure that sampling captures conditions at various times during decant, it is important that samples be spaced out appropriately. The sampling frequency could either be revised to include a minimum separation between samples (e.g., “a minimum of four times per decant, with samples taken at least one week apart”) or to require sampling at a certain frequency (e.g., “once per week during decant”). Additionally, GNWT-ECC notes that there is no requirement to sample prior to decant.	GNWT-ECC recommends that the sampling frequency for SNP station 1696-2 be revised to ensure that samples are appropriately spaced out. GNWT-ECC recommends that the sampling frequency for SNP station 1696-2 be revised to include a requirement for a sample prior to decant.	
10	References	Land and Water Boards of the Mackenzie Valley (LWB). 2023. Standard Water Licence Conditions and Schedules Version 2.1.	N/A	

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Environment and Climate Change Canada (ECCC) - Anna Graham				
1	ECCC Cover Letter	ECCC Cover Letter	N/A	
2	Topic: Proposed Burning for Winter Operations References: - DRAFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence - Solid Waste Management	Part F: Waste and Water Management of the Draft Water Licence Application, states "The Licensee shall not openly burn solid or liquid Waste, except in accordance with the guideline 'Municipal Solid Wastes Suitable for Open Burning', developed by the Government of Northwest Territories - Department of Environment and Climate Change." ECCC suggests that the reference should include the Environment and Climate Change Canada document, "Solid Waste Management for Northern	ECCC encourages the Hamlet to continue pursuing reuse or recycling options until the new site becomes operational, and is cognizant of the various risks associated with summer wildfires. In the absence of other viable disposal options, ECCC recommends that open burning be performed in the early spring when there is still snowcover on the ground to reduce wildfire risks but when improved vertical mixing occurs due to greater heating from a higher sun angle. Furthermore, it is recomme	

nt for Northern and Remote Communities (ECCC; March 2017)

and Remote Communities" in this section, available at the following link: <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/municipal-solid/environment/northern-remote-communities.html> Annex B: Concordance Table, of the Draft Water Licence Application states that the requirement in the Notification of Waste Burning (F.21) is to "inform the Board and Inspector prior to burning waste." No requirement is listed to include for wind direction to mitigate potential negative health impacts for nearby residents.

In the linked related review to the Draft Water Licence Application (Fort McPherson Type B Municipal Licence Renewal Application (G23L3-001) available at <https://new.onlinereviewssystem.ca/review/BA7915C7-DFC1-ED11-9F71-6045BD5BD3FA>), ECCC provided the following recommendation: "ECCC requests that the rationale for necessary burning be provided, and that waste disposal practices are investigated that minimize or eliminate the use of any burning to the extent practical."

The Proponent provided the following response: "The burning of limited quantities of clean wood, paper, and cardboard (biomass) may be used as a method to reduce the volume and extend the capacity of the current solid waste site. The Hamlet understands temperature inversions temporarily trap emissions near ground level and that the emissions are primarily a human health concern. The solid waste site is located 3 km (direct) from the community and is visited infrequently. At this point a burn box or container has not been developed but such containers are used in communities to reduce the volume of limited amounts of clean wood, cardboard, and paper until better management methods such as reuse or recycling are viable. Winter is considered a more optimal season for burning instead of summer to reduce forest fire risk. This is a waste management option the Hamlet would like to keep open to extend the life of the current solid waste site until more reuse, or recycling options become viable or until the new site can become operational."

ECCC acknowledges this response, and suggests that in the interim, in absence of other viable disposal options, open burning could be performed in the early spring when there is still snowcover on the ground to reduce wildfire risks but when improved vertical mixing occurs due to greater heating from a higher sun angle.

ended that burning be performed when wind direction mitigates negative health impacts for nearby residents. ECCC additionally recommends that the Proponent include the Environment and Climate Change Canada document, "Solid Waste Management for Northern and Remote Communities" in Section F of the Draft Water Licence Application, and the requirement to perform open burning when the wind direction mitigates negative health impacts for nearby residents into Annex B of the Draft Water Licence Application.

	al Error References: DR AFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence	y Planning of the Draft Water Licence Application, states "Implement the approved Spill Contingency Plan referred to in Part H, Condition x." ECCC notes that this is likely a clerical error, and should state "Implement the approved Spill Contingency Plan referred to in Part H, Condition 2."	onent update Line 3 of Part H be updated to state "Condition 2" instead of "Condition x."	
4	Topic: Oil and Grease Parameter References: DR AFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence	Condition 12 in Part F: Waste and Water Management, of the Draft Water Licence Application, sets the effluent quality limit for the Oil and Grease parameter as "no visible sheen". Visual perception of a sheen is an important, yet subjective, criterion. The effluent quality limit would be strengthened by adding a concentration limit for oil and grease.	ECCC recommends that the effluent quality limit for the Oil and Grease parameter be revised to "5 mg/L and no visible sheen".	
5	Topic: Outflow Monitoring of Sewage Lake References: DR AFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence	Annex A: Surveillance Network Program in the Draft Water Licence Application requires that the outflow quality of Sewage Lake be monitored at least once per year. According to the Project Description Report data tables, the outflow of Sewage Lake (SNP 1696-3) is typically sampled annually between late October to early December. Unless discharge from Sewage Lake only occurs late in the year, it would be more informative to gather effluent quality data during two distinct discharge periods. Sampling during both high flow and low flow discharge conditions (i.e., spring and fall) would support a better understanding of the range in discharge quality.	Unless the outflow from Sewage Lake is limited to a single season, ECCC recommends monitoring the outflow from Sewage Lake (SNP 1696-3) twice per year, preferably during high flow (following spring break-up) and low flow (before freeze-up) discharge conditions.	
6	Topic: Monitoring of Solid Waste Disposal Facilities References: DRAFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence	According to the Solid Waste Site Operation and Maintenance Manual, the Hamlet has received significant quantities of hazardous waste from the industrial, commercial, and institutional sectors. Given the historic hazardous wastes stored on-site, it would be prudent to monitor for additional relevant contaminants. It would also be beneficial to incorporate a reference station, so that the run-off quality from the Solid Waste Disposal Facilities could be compared against upgradient (background) conditions.	ECCC recommends that the following parameters be added to the Annex A: Surveillance Network Program at SNP station 1696-5 (run-off quality from Solid Waste Disposal Facilities): arsenic; Benzene, Toluene, Ethylbenzene, and Xylene (BTEX); Total Petroleum Hydrocarbons (TPH); and Polycyclic Aromatic Hydrocarbons (PAHs). ECCC also recommends that a solid waste reference station be established in an upgradient and unimpacted area to provide reference (background) data for comparison against the Solid Waste Disposal Facilities run-off quality.	
7	Topic: Errata Reference: DRAFT Type B Water Licence G23L3-001, Hamlet of Fort McPherson - Municipal Water Licence	The Carbonaceous Biochemical Oxygen Demand parameter is typically abbreviated as CBOD5, with the subscript 5 denoting that this is a 5-day test. Annex A: Surveillance Network Program of the Draft Water Licence Application should be updated to incorporate the subscript 5, as it was not included.	With respect to Annex A: Surveillance Network Program of the draft water licence, ECCC recommends revising the sampling parameter "CBOD" to read "CBOD5".	
8	Topic: Slope Contouring References: DRAFT Type B Water Licence G23L3-001, Hamlet of Fort Mc	In the linked related review to the Draft Water Licence Application (Fort McPherson Type B Municipal Licence Renewal Application (G23L3-001) available at <a href="https://new.onlinereviewssystem.ca/review/BA7915C7-DFC1-ED11-9F71-6">https://new.onlinereviewssystem.ca/review/BA7915C7-DFC1-ED11-9F71-6</a>	ECCC requests that the Proponent provide clarification on whether the slope is being re-contoured to be greater than 70 degrees. And if so, provide details on detents or other mitigations being implemented to detract bank sw	

Pherson - Municipal Water Licence

045BD5BD3FA), ECCC provided the following recommendation:

"ECCC recommends the Proponent:

- a) Take precautions to avoid disturbance to nesting Bank Swallows;
- b) Ensure staff and contractors are made aware of potential presence and conservation status of the Bank Swallow;
- c) Prevent Bank Swallows from nesting in areas where operations will be carried out during the breeding season by contouring piles to have slopes of less than 70 degrees prior to their arrival in the spring and by creating suitable nesting habitat in inactive areas with vertical faces of at least 70 degrees; and
- d) Take particular care in selecting erosion prevention and control measures and implement those measures prior to the nesting season.

Proponents are encouraged to consult the attached pamphlet and contact ECCC (cwsnorth-scfnord@ec.gc.ca) for further advice."

The Proponent provided the following response: "The Hamlet of Fort McPherson has updated its Solid Waste Site O&M Manual in Appendix I that relates to section 4.7 and 4.8, to include the pamphlet provided by ECCC regarding Bank Swallows. Hamlet staff will take precautions to become aware of nesting Bank Swallows. This is updated in section 3.6 of the Solid Waste Site O&M Manual. The current slopes at the site are not sustainable and need to be re-contoured to maximize the available airspace at the solid waste site."

ECCC acknowledges this response, but it is not clear if the Proponent will be re-contouring the slope to be more steep. This change in slope would potentially be an attractant for bank swallow nesting sites.

allows from nesting in these areas.