

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
Gwich'in Tribal Council - Lands and Resources - Christina Martin				
1		Application Form Section 7	Regarding the water source and availability, in the second table under 'other users of the water source', the response is 'none'. Recreational users of the waterbody and shoreline must be considered, including any persons with cabins along the lake's edge, boating activities, and travel over the waterbody when it's frozen. We suggest including 'casual recreational use' in this table.	The Hamlet of Fort McPherson recognizes that the lake is used for casual recreational use as described.
2		Application Form Section 9	The GTC reviewer suggests the preferred wording as 'The Hamlet of Fort McPherson is working with the Gwich'in Tribal Council (GTC) to renew the Gwich'in Private Lands Access Lease at Deep Water Lake.'	The Hamlet of Fort McPherson is working with the Gwich'in Tribal Council to renew the Gwich'in Private Lands Access Lease at Deep Water Lake. The Hamlet understands the need to balance the land use with the need to provide clean drinking water to the residents of Fort McPherson.
3		Application Form Section 10	In the table of potential impacts and proposed mitigation, under the Cultural Integrity and Heritage Resources, there is the note that 'Excavation activities may...' and nothing further. It is understood that any excavations would not take place in any previously undisturbed areas; any such proposed activities would require review and authorization by appropriate agencies (e.g., the GTC's Department of Culture and Heritage, the Prince of Wales Northern Heritage Centre). The GTC reviewer suggests under Social and Economic Well-being that local business / employment opportunities be included; the Hamlet's vital services provide important opportunities for training, work, etc.	This section was submitted with a typo. The application should state that excavation activities on previously disturbed sites may still unearth archaeological artifacts. The Hamlet has developed an archaeological chance find procedure in the Solid Waste Operation and Maintenance Manual in Appendix J. It instructs the operator to cease excavation activities and contact the Gwich'in Tribal Council Department of Culture and Heritage and the Prince of Wales Northern Heritage Centre. The Hamlet of Fort McPherson does not foresee the need to disturb previously undisturbed areas through the course of a 10 year water licence term. The Hamlet of Fort McPherson provides steady full-time employment to administrative and public works staff. The Hamlet also supports local businesses in contracting some of the vital municipal services such as sewer and water delivery.
4		Application Form Section 14	This section requires additional supporting information including evidence that the Hamlet has engaged with relevant parties during preparation of their Water License Renewal Application. No evidence has been presented that t	The Hamlet did invite residents to a public meeting on February 28, 2023, in the council chamber. The event was advertised publicly and on the Hamlet's Facebook page.

			<p>The Hamlet conducted engagement activities with interested stakeholders, though the GTC reviewer can confirm ongoing communications with our Lands and Resources Department regarding both the Gwich'in Land and Water Board's (GLWB) Water Licence Renewal Application and the GTC's Access Lease renewal.</p>	<p>The Hamlet did reach out to the Gwich'in Tribal council on March 3, 2023.</p> <p>The Mayor and Council did reach out to the local Designated Gwich'in Organization and the Tetlit Gwich'in Band Chief and Council on March 3, 2023.</p> <p>This water licence is a renewal for vital municipal services that are not new activities or new land uses.</p> <p>The LWB Consultation and Engagement policy makes a provision for municipal undertakings and does not generally expect engagement records or an engagement plan.</p> <p>The Hamlet of Fort McPherson experienced capacity constraints in conducting broader stakeholder engagement prior to the application submission and prioritized submitting an overdue application to the Gwich'in Land and Water Board that was subsequently distributed for public review to all relevant stakeholders.</p> <p>Despite this the Hamlet of Fort McPherson recognizes its role and will continue to work with affected parties, to ensure that potential impacts from all its operations are understood and minimized.</p>
5		Project Description Report	The GTC reviewer appreciates the detailed overviews provided in the Project Description Report, including the maps and informative appendices.	n/a
6		Project Description Report Section 2.1.1 -	<p>Water Intake</p> <p>The GTC reviewer would like to note that a 2021 inspection of the pump house at Deep Water Lake, located in Gwich'in Private Lands Parcel 26, found the site in good and acceptable condition, including environmental management of the exterior fuel tanks on-site.</p>	n/a
7		Project Description Report - Surveillance Network Program (SNP)	<p>The GTC reviewer appreciates the detail provided in the Project Description Report, including ongoing Surveillance Network Monitoring Program efforts and results. Please advise if any proactive actions were taken to address the few past exceedances that were observed (e.g., Biological Oxygen Demand) or if environmental levels stabilized passively.</p> <p>The actual location of SNP 1696-1 should be shown on Figure 11. The Hamlet should make every effort to send environmental samples to the laboratory in a timely manner; it is unfortunate to lose valuable information because samples were received past their hold time (making analyses impossible).</p>	<p>At this time, we are not aware of any specific conditions that caused the exceedance or any actions that stabilized the monitoring results. The pattern of analysis indicates there is fluctuation in the analytical results from year to year.</p> <p>The reporting for SNP 1696-1 is to record the volume of water taken from Deep Water Lake. The flow meter that tracks the volume drawn from Deep Water Lake is inside the pumphouse. A photograph of the meter has been added to the SNP manual.</p>
8		Sewage Disposal Facility Operations and Maintenance Plan	In general, the GTC reviewer has no noted concerns with the body of this plan. We appreciate the in	n/a

			clusion of a plain-language guide for SNP monitoring that can be used, for example, for training and capacity-building purposes for community members.	
9		Sewage Disposal Facility Operations and Maintenance Plan - Appendix C Domestic Waste Disposal	It is unclear what the dashed lines represent; they do not appear to delineate the entire disposal areas. If they represent area boundary lines, the use of a single dashed line might be clearer.	The dashed lines in Appendix C are referenced in the body of the of the Solid Waste Site Operations and Maintenance (O&M) Manual (Section 3.3). They are meant to provide instruction to Hamlet staff about the location and approximate height of the berms that form the solid waste disposal cells. The colour of the dashed lines correspond to the colour of the lines in Figure 4 of the Solid Waste Site O&M Manual.
10		Appendix D - Hazardous Waste Management Plan	It appears that this appendix is copied from the Sachs Harbour water licence. First paragraph, page 2, should be updated to not refer to the requirements of the Inuvialuit Water Board water license for N7L3-1531 (Hamlet of Sachs Harbour).	The hazardous waste management plan is a template that has been modified for the Hamlet of Fort McPherson. The plan has been revised to reference the Gwich'in Land and Water Board.
11		Appendix D - Hazardous Waste Management Plan Page 3:	Are the relevant General Rules posted on-site for the public's and staff workers' awareness? (e.g., 'No smoking', 'Children must not be left unsupervised')	Signage throughout the solid waste site needs to be continually maintained and developed. Maintaining and developing signage is a part of daily inspections and maintenance outlined in Appendix H of the Solid Waste Site O&M Manual.
12		Appendix D - Hazardous Waste Management Plan: Image on page 2 and Figure 2:	This shows idealistic household hazardous waste collection / segregation setups. A recent, relevant, and local photo should be included to demonstrate what current hazardous waste segregation activities actually look like at the site. Figure 1 does not appear to show any segregation of materials.	The hazardous waste management plan is meant to be instructive for Hamlet staff for how a site is to be managed. The current state of the hazardous waste area requires total clean up and a clean start.
13		Appendix D - Hazardous Waste Management Plan: Page 10	There is a reference to the fact that residents may not follow segregation instructions - but no real solutions for this issue are provided. Please include a description of strategies that the Hamlet is taking to direct segregation activities.	All disposal areas of the solid waste site including the hazardous waste area needs to be maintained. The daily inspection sheet in Appendix H of the Solid Waste Site O&M Manual outlines the areas that need to be corrected on a regular basis. Most residents will follow the visual cues in a well segregated area with signage. The best strategy is to follow through on regular operations and maintenance of the solid waste site and maintaining clear signs.
14		Spill Contingency and Reporting Plan Table 2.4:	Include contact names and numbers for the relevant persons.	The contact information has been updated.
15		Spill Contingency and Reporting Plan: Section 2.11.6	Include the approved disposal facility that is being proposed to accept any contaminated water, soil, etc. that results from a spill. In accordance with Section 8 of the GLWB Licence Application (Proposed Waste Management Methods), a written confirmation of the facility's willingness to accept these materials should be provided.	Contaminated soil, or water, because of a spill may be variable in nature and quantity. Contaminated soil and water are typically managed as a hazardous waste when transported for treatment and disposal. As a result, it is not practical to identify the numerous facilities that could potentially receive these materials. Private companies may be variable, change, or fall out of compliance with the appropriate regulator within the term of the plan. The Hamlet of F

				<p>ort McPherson will follow the procedures outlined in the Guideline for Hazardous Waste Management. The owner of a hazardous waste is required to exercise diligence according to Appendix 2 "Selecting a Hazardous Waste Receiver" of the Guideline for Hazardous Waste Management. The Guideline for Hazardous Waste Management also references the listing of registered receiving facilities and their authorizations in the province or territory of destination. In addition, the Guideline for Hazardous Waste Management includes guidance on maintaining accountability of hazardous waste when disposal outside the NWT is required. We hope that these specific measures are understood as best management practices for outlining the proposed waste management methods of spilled material.</p>
16		Solid Waste Site Operation & Maintenance Manual: Table 1.4	All contact information should be updated and consistent across documents. For example, the contact names / positions from in this manual are different from those in Table 2.4 in the spill contingency plan.	The contact information has been updated.
17		Solid Waste Site Operation & Maintenance Manual: Section 4.6	In 2018, the Hamlet responded to GNWT Environment and Natural Resource's concerns regarding its Water Licence Application about wind-blown debris at the Solid Waste Disposal Facility by stating it would investigate the purchase or construction of mobile litter fences to minimize the movement of windblown debris into the surrounding environment. Please provide an update on any progress with this initiative.	There are no current updates, but the Hamlet will continue to explore this option.
18		Solid Waste Site Operation & Maintenance Manual: Section 4.7 Impacts to Wildlife	In 2018, the Hamlet responded to the Gwich'in Renewable Resource Board's concerns regarding its 2018 Water License Application that it would explore the possibility of installing an electric fence around the domestic disposal area to help deter bears from entering. This possibility is mentioned again in this plan. Please provide an update on any progress on exploring this possibility.	There are no current updates, but the Hamlet will continue to explore this option.
19		GTC Lands and Resources Comment Letter	n/a	n/a

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Environment and Climate Change Canada (ECCC) - Victoria Shore				
1	ECCC Cover Letter	ECCC Cover Letter	N/A	
2	Chlorine Monitoring Reference (s): 1. Project Description Report (March 2023)	Per Section 2.1.2 (Storage and Treatment) of the Project Description Report, a Clean-In-Place (CIP) maintenance process is performed every 3 months on the ultrafiltration membranes. The two-step CIP process involves hyper-chlorination (followed by de-chlorination) and an acid bath (followed by neutralization). The CIP process generates about 3,600L of wastewater (1,800L from the chlorination; 1,800L from the acid bat	ECCC requests that the Proponent clarify whether total residual chlorine levels are monitored (e.g., in CIP wastewater or in receiving sewer/treatment system) to ensure that concentrations would not adversely affect the aquatic environment.	Municipal drinking water leaving the Water Treatment Plant is tested for chlorine levels 3 times a day as per the NWT Public Water Supply Regulations, made under the Public Health Act and the Guidelines for Canadian Drinking Water Quality. CIP wastewater is dechlorinated by adding a de-chlorination agent to the water prior to disposal. The wastewater generated is tested by the water plant operator fo

		h), which is discharged to the sewer system.		r the absence of chlorine before being discharged to the sewer system.
3	Wastewater / Sewage Reference (s): 1. Project Description Report (March 2023) 2. Sewage Disposal Facilities Operation and Maintenance Plan	The Sewage Disposal Facilities Operations and Maintenance Plan does not discuss how sewage lagoon effluent would be managed should effluent quality not meet discharge requirements.	ECCC recommends that the Sewage Disposal Facilities Operation and Maintenance Plan include a discussion of potential contingency options to manage any sewage lagoon effluent that does not meet water licence discharge criteria at the time of discharge/decant.	The Hamlet of Fort McPherson is required to submit samples to the Water Resource Officer for their approval prior to decant to ensure that the effluent is below criteria. If effluent is above criteria the decant will not be authorized and additional treatment time will be needed. To account for this possibility, decant approval process will be started at a time to allow for of 2-4 weeks of additional treatment without the 1m freeboard being compromised should the original decant request be denied. This contingency has been added to Section 3.1.2 of the revised Sewage Disposal Facilities O&M plan.
4	Operation and maintenance details for Sewage Lake Reference (s): 1. Sewage Disposal Facilities Operation and Maintenance Plan	Although Sewage Lake receives piped sewage, the application documents do not provide operation and maintenance information for this site. The Sewage Disposal Facilities Operation and Maintenance Plan states that the operation and maintenance of Sewage Lake is not within the scope of that plan but does not indicate where such information is provided.	ECCC recommends that the Proponent provide operation and maintenance information regarding sewage treatment and management at Sewage Lake.	Chii Tsal Vàn (Sewage Lake) is a natural attenuation wetland treatment area with a SNP Station (1696-3) monitors the outflowing water before entering Chii Tsal Vàn Gwinjik. The sewage discharge pipe and signage are inspected for damage and to ensure they are in working order. The wording "not within the scope of this plan" has been removed and the information above has been added to the revised Sewage Disposal Facilities O&M Plan.
5	Lagoon Monitoring Reference (s): 1. Sewage Disposal Facilities Operation and Maintenance Plan	Section 3.1.2 (Operation from Break-up to Freeze-up) of the Sewage Disposal Facilities Operation and Maintenance Plan notes that the colour of the wastewater can be used as an indicator of lagoon performance. However, the plan does not describe how to use lagoon colour as an indicator.	ECCC recommends that the Sewage Disposal Facilities Operation and Maintenance Plan include a description of how water colour is used as an indicator of lagoon performance, and discuss how this indicator will inform lagoon operation and maintenance.	Information on how colour can be used as an indicator for lagoon performance has been added to section 3.1.2 of the revised Sewage Disposal Facilities O&M Plan.
6	Sludge Monitoring Reference (s): 1. Sewage Disposal Facilities Operation and Maintenance Plan	Per Section 3.1.4 (Sludge Depth Measurements) of the Sewage Disposal Facilities Operation and Maintenance Plan, sludge depth measurement is not known to have taken place at the sewage lagoon. The plan indicates that sludge measurement would be conducted in accordance with guidelines once sufficient resources and needs warrant sludge depth measurement. However, the plan does not describe how to determine when sludge measurement is warranted.	ECCC recommends that the Sewage Disposal Facilities Operation and Maintenance Plan describe how timing of sludge depth measurement will be determined/triggered. This should include a discussion of how lagoon performance and effluent quality trends will inform the timing of sludge depth measurement.	Sludge measurements will need to be conducted annually following procedures in Appendix D of the Sewage Disposal Facilities O&M Plan to determine the current levels and accumulation rates. Once these have been determined a schedule for future sludge depth measurements can be developed by the Hamlet. This change has been added to section 3.1.4 of the revised Sewage Disposal Facilities O&M Plan.
7	Quality Assurance / Quality Control samples and field measurements	Reference(s): 1. Appendix E (Surveillance Network Point Monitoring Plan) of Sewage Disposal Facilities Operation and Maintenance Plan 2. Appendix F (Surveillance Network Program Manual) of Solid Waste Disposal Facilities The SNP Monitoring Plan (Appendix E) and SNP Manual (Appendix F) do not indicate whether sampling events include Quality Assurance/ Quality Control (QA/QC) s	ECCC recommends that sampling events incorporate QA/QC samples (e.g., sample blanks, travel/trip blanks, replicate samples), measurement/recording of field parameters (e.g., pH and water temperature) and field notes (e.g., weather conditions, waterbody conditions) at the time of sampling. Field measurements, field notes, and QA/QC sample results should be used to support interpretation of monitoring results and included in annual reports.	The HOFM recognizes the measures that can be taken to improve QA/QC in its SNP sampling. Additional information has been added to the SNP Manual in Appendix F of the Solid Waste Site O&M Manual. The HOFM will continue to seek training in all aspects of environmental monitoring to build up its internal capacity to improve the QA/QC of its SNP sampling events

		<p>amples and field measurements. Incorporating QA/QC samples during sampling events would enable the Proponent to identify and address issues that could affect the quality of the monitoring results. Recording field measurements, weather conditions and field observations at the time of sampling is important to support the interpretation of monitoring results.</p>		
8	Solid Waste Management	<p>Reference(s):</p> <ol style="list-style-type: none"> 1. Project Description Report (March 2023) 2. Solid Waste Disposal Facilities – Appendix D: Hazardous Waste Management Plan 3. Solid Waste Site Operation and Maintenance Manual (2023) 4. Solid Waste Management for Northern and Remote Communities (ECCC; March 2017) <p>Section 3 (Growth Forecasts) of the Project Description Report notes that the capacity of the existing solid waste site will likely be constrained and the Hamlet will need to develop the new solid waste disposal facility (SWDF). Given the likelihood of disposal capacity limitations, ECCC notes that it will be important to consider how best to address capacity constraints. It appears that the hazardous waste storage area has already exceeded the available capacity. According to Section 3.4 (Hazardous Waste Area) of the Solid Waste Site Operation and Maintenance Manual, hazardous waste has started to accumulate outside of the bermed hazardous waste storage area. The Hamlet plans to remove the historic stockpiles of hazardous waste and prevent the stockpiles from reoccurring. The Hamlet also plans to discontinue use of this area for the storage of hazardous waste and conduct a site assessment to determine the extent of contamination and remediation required once the stockpiles have been removed. A new household hazardous waste collection area will be established in the bulky waste area with controlled access. This section also notes that the Hamlet will clearly communicate with the Industrial, Commercial, and Institutional (ICI) sector that ICI hazardous waste will no longer be accepted. The Hazardous Waste Management Plan notes that once a hazardous waste inventory has been established, then the community can take the proper steps to arrange for the transportation and disposal of hazardous wastes.</p>	<p>ECCC supports the Hamlet's efforts to address historic hazardous waste stockpiles and to establish responsible practices for hazardous waste management going forward. ECCC recommends that the Proponent consult ECCC's planning and technical guidance document "Solid Waste Management for Northern and Remote Communities" to support responsible solid waste management and eventual closure at the existing SWDF and in the establishment of a new future SWDF. This document provides guidance on best practices for the planning, design, operation, and closure of municipal solid waste facilities in northern and remote regions. Key topics raised by the Proponent (e.g., disposal capacity, new SWDF, hazardous waste management) are addressed in the technical guidance document. Closure of the existing SWDF is also a key consideration if a new SWDF is planned.</p> <p>A summary and a link to the full document are available on Environment and Climate Change Canada's website at: http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=97182135-1</p>	<p>The HOFM has referenced ECCC's planning and technical guidance document "Solid Waste Management for Northern and Remote Communities" throughout the Solid Waste Site Operations and Maintenance Plan.</p>
9	Solid Waste Disposal Site Drainage Reference(s):	<p>Per Section 1.3.4 (Hydrology) of the Solid Waste Site Operation and Maintenance Manual, the solid waste site is located on an elevated area in relation to its surroundings. It appears that surface</p>	<p>ECCC recommends that solid waste disposal site drainage be kept separate from sewage effluent and requests that the Proponent clarify whether solid waste disposal site drainage (runoff, leachate</p>	<p>The HOFM will inspect roadways and identify areas that need ditching to prevent runoff from entering the sewage lagoon. Section 4.2 of the Solid Waste Site O&M Manual states the following, "A r</p>

	1. Solid Waste Site Operation and Maintenance Manual (2023)	runoff from the solid waste site flows toward the sewage lagoon. However, it is unclear to the reviewer whether drainage from the solid waste disposal site enters the sewage lagoon. ECCC advises that drainage from solid waste disposal sites may contain contaminants, such as metals, that could interfere with sewage treatment processes.	e) is able to enter the sewage lagoon. The Solid Waste Site Operation and Maintenance Manual should include measures to prevent solid waste disposal site drainage (runoff and leachate) from entering the sewage lagoon or any other sewage treatment areas.	road surrounds the sewage lagoon and the Hamlet will maintain the ditch between the road and the waste piles to prevent surface water runoff from flowing directly into the sewage lagoon.”
10	Proposed Burning for Winter Operations Reference (s): 1. Solid Waste Site Operation and Maintenance Manual (2023) 2. Solid Waste Management for Northern and Remote Communities (ECCC; March 2017)	In Section 6.4 (Seasonal work) of the Solid Waste Site Operation and Maintenance Manual, the winter sub-section mentions the burning of clean wood, paper, and cardboard if required. No rationale is provided for the necessity of burning these substances. Burning in winter is problematic due to frequent temperature inversions near ground level that vertically trap emissions. ECCC guidelines discourage the use of open burning.	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.	Rationale: 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 (directly) 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.
11	Impacts to Migratory Birds and Species at Risk Reference (s): 1. Solid Waste Site Operation and Maintenance Manual (2023) 2. Sewage Disposal Facilities Operation and Maintenance Plan	ECCC notes some wildlife related information is missing or inconsistent within the various operation and maintenance plans provided for review. The Solid Waste Site Operation and Maintenance Manual contains sections detailing impacts to wildlife as well as migratory birds and species at risk. Similar sections do not appear to be present in the Sewage Disposal Facilities Operation and Maintenance Plan. As with the Solid Waste Site, the Sewage Disposal Facility has the potential to pose various risks to wildlife, migratory birds and species at risk. Similar information on impacts to wildlife, migratory birds and species at risk should be detailed within this plan as well. Table 4, of the Solid Waste Site Operation and Maintenance Manual, summarizing species at risk present within the Fort McPherson Area, contains inaccuracies in the assessment and listing statuses for several species. Table 1 in Appendix A contains a list of species that are likely to be encountered in the Project area that have been assessed as at risk by Committee on the Status of Endangered Wildlife in Canada (COSEWIC) or listed on S	ECCC recommends the Proponent ensure information on potential risks to migratory birds and species at risk is detailed in all operation and maintenance plans where relevant. As species are assessed and listed on a regular basis, ECCC recommends the Proponent consult the Species at Risk registry (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html) to obtain the most current information for their operations and ensure that this information is kept up-to-date.	The Sewage Disposal Facilities Operation and Maintenance Plan has been revised to include a section on impacts to wildlife and species at risk. The inaccuracies in the listing of species at risk in Table 4 of the Solid Waste Site Operations and Maintenance Manual have been revised based on the information provided. The information regarding species at risk has also been updated in the Sewage Disposal Facilities Operation and Maintenance Plan.

		chedule 1 of Species at Risk Act (SARA).		
12	Project activities in Bank Swallow habitat within its range Reference (s): 1. Solid Waste Site Operation and Maintenance Manual (2023)	<p>The Proponent notes that the project is within the range of Bank Swallows. Further, Section 3.1 of the Solid Waste Site Operation and Maintenance Manual contains information detailing the method for solid waste disposal. The method, which as described, generates steep slopes and where layers are capped with granular material, may lead to the creation of suitable nesting habitat for Bank Swallow. In addition, existing excavation activities, detailed under section 3.6, appear to occur near or result in the creation of steep side slopes that may also be suitable nesting habitat for Bank Swallows.</p> <p>The Bank Swallow, listed as Threatened under SARA, is a colonial species that nests in burrows dug into near vertical faces of exposed sand or soil. They also nest in aggregate pits, construction and/or mine sites on stockpiles of quarry materials, overburden, and exposed soil banks. The Bank Swallow exhibits high nest site fidelity and will reuse nesting sites and burrows. The residence description for the Bank Swallow is available on the SARA registry here: https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/residence-descriptions/bank-swallow.html.</p> <p>Excavation, construction activities and application of erosion control measures in these areas during the nesting period can inadvertently kill or disturb Bank Swallows, destroy their residence or critical habitat, and may also affect other migratory bird species.</p>	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-scfnd@ec.gc.ca) for further advice.	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 recontoured to maximize the available airspace at the solid waste site.

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
GNWT-ENR - EAM (Environmental Assessment and Monitoring) - Environmental Regulatory Analyst				
1	ECC Cover Letter	Please see attached.	N/A	n/a
2	Department Amalgamation and Name Change	The Department of Environment and Natural Resources (ENR) is listed as a contact in the application and in multiple operation and maintenance plans. As of April 1st, 2023 The Department of Environment and Natural Resources and The Department of Lands have amalgamated and became the new Department of Environment and Climate Change (ECC). New phone numbers were issued during this department name change. The Water Resource Office phone number is now 867-678-8091 extension 53659	Update all O&M plans to reflect this name change and contact number change to ensure timely contact with the department.	The O&M manuals have been updated and references to ENR have been updated to ECC.
3	Hazardous Waste Collection	The Hazardous Waste Storage Area has been a concern for contamination for some years. During inspections conducted by The Department of Environment and Natural Resources it has been	Refer to the Guideline for Hazardous Waste Management developed by The Department of Environment and Natural Resources (October 2017) for proper storage	The Guideline for Hazardous Waste Management in the NWT has been referenced in the Solid Waste Site O&M Manual as well as the Hazardous Waste Management Plan.

		n noticed by officers that improper storage of hazardous waste has allowed the products to enter the environment with little to no remediation of the area.	practices of different types of hazardous wastes. Have all soils impacted by hazardous materials removed and remediated as soon as possible.	
4	Hazardous Waste Stock Removal	The Department of Environment and Climate Change (ECC) acknowledges that the Hamlet of Fort McPherson has plans to remove current stock piles of hazardous wastes that are extending outside of the hazardous waste storage area. The Department of ECC also acknowledges the Hamlet of Fort McPherson's plans to remediate the impacted area at a later date.	N/A	n/a
5	Hazardous Waste Receiver	The Hamlet of Fort McPherson is a registered generator but is not registered as a waste receiver.	Contact ECC's Environment Protection Intern, Benjamin Elkin, at Benjamin_Elkin@gov.nt.ca to register as a receiver.	The Hamlet of Fort McPherson has contacted the representative at ECC and register as a receiver.
6	Solid Waste Disposal Facility O&M Plan - Controlling Access and Historic Hazardous Waste Stock piles	Section 3.2 and 3.4 of the Solid Waste Facility O&M Plan highlight a significant issue regarding large quantities of hazardous waste accumulating over previous years at the solid waste site. The O&M plan attributes these significant quantities of hazardous waste to unauthorized drop-offs of hazardous waste from the Industrial, Commercial, and Institutional (ICI) sector. It is noted that the Hamlet does not propose gate control (beyond opening the gate in the morning and closing at night, but not monitored). It is also noted while there is fencing on certain sides on the landfill, fencing is incomplete (It is noted an electrical fence may be considered for one area). Without an updated approach to controlling access and monitoring deposited waste at the site it is likely the deposits of hazardous waste from the ICI sector will continue to grow. The plan states a public outreach campaign will be done to inform the ICI sector; however, it is further noted in both the July 2018 and July 2020 Water Licence Inspection Reports that there are long standing non-compliance issues at the landfill. Issues identified in the inspections include Hamlet Staff monitoring the landfill, segregation of waste types including hazardous waste, accepting responsibility for fuel tanks at landfill, gate control and fencing.	ECC recommends the hamlet take further measures to control access, such as shortening opening hours, keeping a key at the hamlet office for sign-in/sign-out, having a staff member present at landfill during peak hours, fencing or other alternative measures. ECC recommends a schedule be included in the Solid Waste Disposal Facility O&M Plan outlining when the foreman or a designate will complete segregation activities and inspections for hazardous waste issues (recommend twice a week). ECC recommends a plan with milestone dates be provided regarding when and how the Hamlet proposes to address historic stock piles of hazardous waste noting the Hamlet may currently be working with MACA to address this issue using federal funding coordinated through MACA.	ECC has recommended a suite of suggestions to control access to the solid waste site that will be considered. The Hamlet has included the timing of solid waste maintenance activities in section 5.0 of the Solid Waste Site O&M manual. In addition, a solid waste site inspection checklist has been included in Appendix H. The Hamlet invites the suitable ECC representative or Water Resource Officer to contact the Hamlet directly outside of the public review to learn about the most current workplans.
7	Appendix D, Hazardous Waste Management Plan- NT/NU Spill Report Line Fax Number	On page 24 of Appendix D (Hazardous Waste Management Plan) under Spill Reporting the discontinued Fax number (867-873-6924) is listed. Fax is no longer an option for sending spill reports, please continue to phone in reports to 867-920-8130 or email to spills@gov.nt.ca.	Remove the fax number from page 24.	The fax number has been removed.
8	Spill Contingency Plan - Reportable Spills	The Spill Contingency Plan suggests in section 2.10 (Flowchart) and section 2.11.4 that spills are only reportable if volumes exceed those listed in the Immediately Reportable Spill Quantities table from the AANDC Guideline for Spill Contingency Planning. However	ECC recommends updating section 2.10 to show that minor spills shall be reported to the NT 24-hour Spill Report Line during regular business hours (this can be included in same box as consult with regulator).	Section 2.10 in the revised Spill Contingency Plan has been updated to state all spills will be reported to the spill line and spills over the quantities outlined in Appendix 1 will be immediately reported. Appendix 1 has been revised to be in line with NWT Immediate

		er, ECC notes that this table lists 'immediately' reportable spills, not what is reportable. All spills can be reported to the NT 24-hour Spill Report Line. Reporting to the Spill Line serves as notification to regulators. Minor spills may not need reported 'immediately' and can be done post spill response during regular business hours.	ECC recommends updating section 2.11.4 wording to state that all spills are reportable to the NT 24-hour Spill Report Line and not just volumes listed in the Immediately Reportable Spill Quantities table from the AANDC Guideline for Spill Contingency Planning.	ly Reportable quantities listed at https://www.ecc.gov.nt.ca/en/services/report-spill
9	Solid Waste Site Facility Gate 3.1	Gate left unlocked during non-business hours.	Lock the gate at entrance to the Solid Waste site facility during non-business hours	The Hamlet has stated the operating hours in its Operation and Maintenance Manual and that the gate will be locked outside of operating hours in section 4.1 of the Solid Waste Site O&M Manual.
10	The Hamlet of Fort McPherson Solid Waste Site Facility 3.2	Not to accept and type of debris for commercial and industrial sector.	Inform the commercial and industrial sector that the landfill cannot accept any debris	The Hamlet has clearly stated in the acceptable and unacceptable waste types in Tables 2 & 3 of the Solid Waste Site Operations and Maintenance Manual. It clearly states it will not take hazardous waste from the industrial, commercial, or institutional sector. The Hamlet will communicate directly with residents and the ICI sector in its community.
11	3.3 Hamlet of Fort McPherson to instruct public where to dump	Public dumping debris all over, no segregation.	Hire landfill operator to instruct where to dump.	Section 3.3 states the following, "The Hamlet of Fort McPherson will mark the boundaries of the disposal area and place municipal domestic solid waste in this area following a fill sequencing plan using the area method outlined in Figure 5. The area is used by municipal collection vehicles as well as by residents who self haul their own domestic garbage during regular operating hours." Maintaining clear signage and access to disposal cells is outlined in Appendix H.
12	3.4 The Hamlet of Fort McPherson not to accept from commercial and industrial sector used/waste oil, batteries, glycol and any other hazardous material	Commercial and industrial sector bringing used oil, glycol, batteries, placing all over.	Inform the commercial and industrial sector that the landfill does not accept and used/waste oil, glycol, batteries at the solid waste site.	The Hamlet has clearly stated in the acceptable and unacceptable waste types in Tables 2 & 3 of the Solid Waste Site Operations and Maintenance Manual. It clearly states it will not take hazardous waste from the industrial, commercial, or institutional sector. The Hamlet will communicate directly with residents and the ICI sector in its community.
13	Spill Contingence Plan, 4.1.1	The application states the contact for the Water Resources Officer is (867) 678-6676.	The new contact for the Water Resource Officer is (867) 678-8091, Ext: 53659, No longer ENR, new Department is Environment & Climate Change (ECC).	The contact information has been updated in section 4.1.1.
14	4.2 of the Solid Waste Site Operations with subject Groundwater	The application has samples to be taken from groundwater well sites.	Groundwater wells not part of the water license. These groundwater wells were installed by private contractor, not the Hamlet's responsibility to grab samples from these wells.	The reference to groundwater wells in the solid waste site operation and maintenance manual is to alert the operators of their presence so they do not damage them with heavy equipment.
15	4.9 under Inspections and Record Keeping	The Hamlet of Ft. McPherson stated they will contact the Water Resource Officer with unknown sources that deposits unauthorized dumping.	It is the responsibility of the licensee to have unauthorized dumping sampled and disposed at a licensed facility.	Section 4.9 of the Solid Waste Site O&M Manual outlines a series of steps the Hamlet takes before contacting the Water Resource Officer upon encountering unacceptable waste at their facility. These steps are summarized from training materials developed by the Solid Waste Association of North America. Alerting the appropriate

				te authority to a situation that cannot be resolved by the Hamlet is a last resort. The Hamlet will work with the appropriate parties including the regulator to hold the responsible party accountable before taking on liability for wastes it is not authorized to accept.
16	3.1.3 of Operations and Maintenance Procedures under Sewage Disposal Facilities	Windblown material that enter the sewage lagoon.	All windblown material to be collected from the sewage lagoon daily as windblown material will prevent the lagoon from the sunlight. This will hamper the lagoon from doing its job not getting the sunlight.	The Hamlet of Fort McPherson will work to prevent windblown debris from escaping solid waste disposal cells. The methods are described in section 4.6 of the Solid Waste Site O&M Manual as well as Appendix H.
17	3.2 of the Operations and Maintenance Procedures under Sewage Disposal Facilities	Discharge Chute Not catching all grey water and sewage when sewage truck emptying tank.	Have the discharge stable from sliding down the slope to the sewage lagoon to prevent the chute from sliding to catch all grey water and sewage when sewage truck emptying tank.	The discharge chute will be inspected and repaired as required.
18	Water Facilities	Access road to Freshwater source Deep Lake, gate unlocked from preventing public entering the freshwater source.	Keep the gate locked during non-business hours to prevent public from accessing the Hamlet's freshwater source.	The Hamlet of Fort McPherson works with the Gwich'in Tribal Council to renew the Gwich'in Private Lands Access Lease at Deep Water Lake.

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Fisheries and Oceans Canada (DFO) - Triage Group Fisheries Protection Program				
1	Fort McPherson Type B Municipal Licence Renewal Application (G23L3-001)	The proposal has been reviewed to determine whether it is likely to result in the death of fish by means other than fishing or the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the Fisheries Act; and, effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the Species at Risk Act.	Fisheries and Oceans Canada recommends the proponent review the Interim Code of Practice for End-of-Pipe Fish Protection Screens for Small Water Intakes at https://www.dfo-mpo.gc.ca/pnw-pppe/codes/screen-ecran-eng.html . Provided the plans can meet the Code of Practice guidelines and applicable Measures to Protect Fish and Fish Habitat (https://www.dfo-mpo.gc.ca/pnw-ppe/measure-mesures-eng.html), the Fish and Fish Habitat Protection Program (the Program) is of the view that the proposal will not require an authorization under the Fisheries Act or the Species at Risk Act. If the project is unable to comply with the Interim Codes of Practice or the Measures to Protect Fish and Fish Habitat, we recommend that the proponent submit a Request for Review (http://www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/forms-formes/request-demand-eng.pdf) of the project. Should plans change or if the proponent has omitted information in the proposal, further review by the Program may be required. It remains the responsibility of the proponent to remain in compliance with the Fisheries Act, avoid prohibited effects on listed aquatic species at risk, any part of their critical habitat or the residences of their individuals, and prevent the introduction of non-indigenous species. It is also the proponent's Duty to Notify DFO if they have caused, or are about to cause, the harmful alteration, disruption or destruction of fish habitat and/or th	A Johnson anti-fish screen is installed on the Deep Water Lake intake. The screen has an effective surface area of 2.212m ² . Using the End-of-Pipe Screen Size Tool provided at https://www.dfo-mpo.gc.ca/pnw-ppe/codes/screen-ecran-eng.html a surface area of 2.212m ² allows for a flow rate of 77 L/s. The Truck fill station at deep water lake uses a RWP-1 submersible pump to fill water trucks at 2,500 L/min or 41.67L/s. The Hamlet believes the screen is sufficient to meet the Code of Practice for End-of-Pipe Fish Protection Screens for Small Water Intakes as the flow rate is under 77 L/s. Information on the anti-fish screen has been added to section 5 of the Water Treatment Plant O&M Plan

e death of fish by means other than fishing.

No.	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Gwich'in Tribal Council - Department of Cultural Heritage - Sharon Snowshoe				
1		<p>We have reviewed the above application against our heritage databases and have the following information and concerns.</p> <p>There is extensive traditional use of the areas under consideration, and for this reason and due to the proximity of Fort McPherson, the OCH has concerns about healthy people, animals, and the environment. The area has been used extensively for hunting (in particular, it is a boreal woodland caribou area), trapping, fishing, travelling across, and berry/rhubarb harvest.</p> <p>The OCH appreciates the use of Gwich'in place names in this application. There is a minor spelling error: The lake which the garbage dump and sewage flows into is Aat'oo Zhlt Van (note the glottal stop between the "t" and the first "o" of Aat'oo and the low tone on the "i" of Zhlt). The typos are likely copy/paste errors. The official name of Aat'oo Zhlt Van should be used in the report and not the translation of this name, for example under heading 4.4 on page 12 of the Hamlet of Fort McPherson Water Licence Renewal Application G03L3-001, "This station monitors the runoff from the solid waste site. Samples are drawn from Birch-in Lake" (italics added). The lake and creek through which the piped sewage drainage flows are officially called Chii Tsai Van and Chii Tsai Van Gwinjik</p>	<p>There are possibly camps/cabins in the zone as well. If any health issues may arise from the use of this area, and if use of the area is ongoing, then it is imperative that the residents of Fort McPherson are informed of any risks (for example, through signage, public discourse, etc.) and that mitigation measures are taken.</p> <p>As with any application, if archaeological or heritage materials are encountered during the development within the Gwich'in Settlement Area, all work must cease immediately as required by law, and the Department of Culture and Heritage and the Prince of Wales Northern Heritage Centre in Yellowknife must then be contacted.</p>	<p>The Hamlet of Fort McPherson regrets the errors and greatly appreciates the corrections. The revisions will be made throughout as recommended.</p> <p>The Hamlet of Fort McPherson understands the concerns about land use surrounding its operations at the solid waste site and Deep Water Lake. The Hamlet has a responsibility to invest in, operate and maintain infrastructure to provide vital services to the residents of Fort McPherson such as clean drinking water, as well as sanitary services such as sewage and solid waste disposal. It does so while striving to minimize its impact and preserve traditional uses of the land and water.</p> <p>The Hamlet has developed an archaeological chance find procedure in the Solid Waste Operation and Maintenance Manual in Appendix J. The procedure instructs the operator to cease excavation activities and contact the Gwich'in Tribal Council Department of Culture and Heritage (Social and Cultural Heritage Institute), and the Prince of Wales Northern Heritage Centre.</p>