

Review Comment Table

Board:	GLWB
Review Item:	Hamlet of Fort McPherson - Construction of New Solid Waste Disposal Facility (G03L3-001)
File(s):	G03L3-001
Proponent:	Hamlet of Fort McPherson
Document(s):	New SWDF - Engineer Diagrams (1.1 MB) New SDWF - Arial Images (22 KB) New SWDF - Project Description (27 KB)
Item For Review Distributed On:	
Reviewer Comments Due By:	July 18, 2018
Proponent Responses Due By:	July 23, 2018
Item Description:	In accordance with Municipal Water Licence G03L3-001, Part H, the Hamlet of Fort McPherson has submitted to the Gwich'in Land and Water Board for approval a proposal to construct a new Solid Waste Disposal Facility .The Board is considering the submission and appreciates any comments or recommendations from reviewers.
General Reviewer Information:	The Board encourages reviewers to submit comments and/or recommendations on SWDF through the Online Review System, no later than Wednesday July 18, 2018. Note that all documents that have been uploaded to this review are also available on our public registry. If you have questions or require assistance with the ORS, please contact Board staff identified below.
Contact Information:	AlecSandra Macdonald 867-777-4954

Comment Summary

Environment and Climate Change Canada: Eva Walker				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	ECCC No Comment	<p>Comment ECCC has reviewed the materials provided for the construction of the New Solid Waste Disposal Facility in Fort McPerson in accordance with the departments mandate and has no comments at this time.</p> <p>Recommendation N/A</p>		
GNWT - ENR: Central Email GNWT				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
19	General File	<p>Comment (doc) ENR Letter with Comments and Recommendations</p> <p>Recommendation</p>		
1	Topic 1: Project Description, Equipment List and 2015 Engineering Drawing	<p>Comment There is only a brief project description contained in the cover letter to the GLWB. The project description is not considered adequate to properly review the proposed activity. Additionally, the engineering drawing is dated from 2015 and does not adequately reflect the engineering and location of the proposed new Solid Waste Disposal Facility (SWDF). Also, the very brief project description does not contain an equipment list of vehicles and equipment, or a detailed description of activities to be utilized in construction of the new SWDF.</p> <p>Recommendation 1) ENR recommends that the Hamlet submit a detailed project description, observing and utilizing recommendations presented by ENR in their comments and recommendations herein, and not in the form of a cover letter to the Board, to enable ENR to properly review the proposed construction of the new SWDF prior to its construction.</p>		
2	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends that the Hamlet submit to the Board, for review purposes, an updated current engineering drawing that indicates in detail the proposed access road and new SWDF.</p>		

3	None	<p>Comment None</p> <p>Recommendation 3) ENR recommends that the Hamlet submit a detailed list of equipment that will be utilized for the project activities.</p>		
4	Topic 2: Project Footprint	<p>Comment It isn't clear to ENR if this expansion is considered to be within the footprint (aerial extent) of the previous Water Licence. If the new SWDF is considered to be outside of the original Water Licence footprint, then this activity could actually be a Water Licence amendment application rather than an activity that is approved by the Board under the current Water Licence requirement. A change in footprint (areal extent) of the project would be a change in scope, and therefore would require the submission of a Water Licence amendment application.</p> <p>Recommendation 1) ENR requests that the Board clarify if this activity is within the footprint of the currently issued Water Licence project description. If the activity is outside the areal extent of the current Water Licence, a Water Licence amendment application should be considered for this project.</p>		
5	Topic 3: ECCC Guidelines “ Solid Waste Management for Northern and Remote Communities (March 2017)	<p>Comment The Solid Waste Management for Northern and Remote Communities Guidelines were released by Environment Canada and Climate Change (ECCC) in March 2017. Section 5.0 of this document offers guidance with respect to Landfills in northern communities, including Landfill Designs: (Base liners & Leachate Management, Cover Systems, etc.), Landfill Construction, etc. and operations: Management of Major Waste Types (Section 6), Waste Management Planning and Continuous Improvement & Community Waste Assessment (Section 2), Solid Waste Facility Site Selection (Section 3.0), Performance Monitoring and Reporting (Section 7), and Solid Waste Facility Closure and Post-Closure.</p> <p>Recommendation 1) ENR recommends the Hamlet refer to the best practices and principles, from the document ECCC Solid Waste Management for Northern and Remote Communities Guidelines during construction of the new SWDF.</p>		
6	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends that the Hamlet refer to the application of such practices and principles in a more detailed project description submission to the Board.</p>		
7	Topic 4: SWDF to Contain Wastes and Prevent Off- site Migration	<p>Comment The ECCC guideline identifies containing waste in a manner that minimizes risk of off-site contamination/pollution - by contaminants migrating beyond the limits of the SWDF property boundary (Section 5.2.1 of ECCC Guidelines) as a primary objective for design and operation of existing and new landfills. Possible pollutant migration pathways identified from landfills include surface water and groundwater. Page one of the Project Description letter specifies that the new SWDF will drain into the Shale pond (former shale pit) - which subsequently drains to the Peel River, via a channel or small stream leading out under the Dempster highway. Page 2 of the Engineering</p>		

	of Contaminants	Diagrams suggests that SWDF surface water drainage drains into the Run-off and Leachate Ponds and then into the Shale Pond to Peel River drainage system. ENR is concerned that leachate from the SWDF should not drain directly into the Peel River receiving environment. Additional information on measures to prevent landfill leachate from entering the surface and groundwater should be provided. Recommendation 1) ENR recommends the Hamlet provide further details, in a resubmitted project description, regarding the potential for contaminants to migrate from the SWDF into the Peel River and surrounding environment.		
8	None	Comment None Recommendation 2) ENR recommends the Hamlet identify measures, in a resubmitted project description, that will be implemented to prevent uncontrolled migration of landfill leachate into the local surface and groundwater receiving environment.		
9	Topic 5: SWDF Leachate and Runoff Quality "Monitored as Entering Shale Pond"	Comment Engineering Diagrams, p. 2, illustrates 3 ponds. The Run-off pond and the Leachate Pond are planned to be constructed within the new SWDF footprint. The third pond represents the flooded "shale pit" located to the west of the new suggested SWDF. ENR was unable to locate information, pertaining to how and when SWDF leachate and run-off will be introduced into the Shale pit drainage system, and draining into the Peel River. The submitted aerial images suggested, p. 2, that an SNP location be located at the exit from the Shale pit. ENR is not certain whether the Shale is considered to be part of the SWDF leachate management system, or whether it is considered to be part of the receiving environment. If it is considered part of the leachate management system, then additional information should be provided regarding how discharge from the Shale pit will be controlled, connections between the pit and the groundwater regime, etc. If the Shale pit is considered part of the receiving environment, then effluent from the run-off and leachate ponds should be sampled prior to being discharged to the pit. ENR notes that ECCC guidelines recommend a minimum 30m-100 m setback between the landfill and the nearest stream or river (Table 3-7). ENR understand this minimum setback to imply that no drainage systems should directly connect a SWDF to a nearby stream or river. Recommendation 1) ENR recommends the Hamlet clarify, in a resubmitted project description how the Shale pit is being used, and update the design plan and engineering drawing(s) as necessary.		
10	Topic 6: Non-Compliance Items - Outstanding	Comment ENR notes that the most recent Operation and Maintenance Plan (O&M Plan) on file for the McPherson SWDF is dated of September 1997. As well, the September 2016 ENR inspection report identifies the following non-compliance items: . Missing SWDF O&M Plan (for current facility) - including O&M Plan for Landfarm operations; . Missing Sewage Disposal Facilities O&M Plan; . Missing Spill Contingency Plan; and [A "Water Intake Pumphouse Spill Plan" was submitted in 2017, but no		

	Management Plans	<p>SCP for other Municipal Facilities where hazardous material are being stored.] . Missing term of reference for a bio-physical assessment of the environment receiving the sewage effluent discharges. Waste Management and Spill Contingency Plans, and other plans, are documents of crucial importance, which provide site- specific information and procedures to best support staff tasked with managing Solid Waste Disposal Facilities and any associated potential environmental risks.</p> <p>Recommendation 1) If not already provided, ENR recommends that all Waste Management Plans, and other plans mention above, to be submitted and approved by the GLWB prior to beginning of construction and operation of the new SWDF.</p>		
11	None	<p>Comment None</p> <p>Recommendation 2) If not already provided, ENR recommends that the O&M Plan for the new SWDF to be submitted and approved by the GLWB prior to beginning of operations at the new SWDF.</p>		
12	Topic 7: Controlled Access to SWDF “ High Priority Measure	<p>Comment ENR's most recent inspection conducted on September 8, 2016, identified the presence of a significant amount of unorganized and improperly stored hazardous wastes at the current SWDF site, including barrel drums and plastic totes with unknown contents, batteries and various chemical products. The inspection report further identifies that the Hamlet has historically had the challenge of dealing with unauthorized use of the landfill. This challenge is said to be largely due to the current landfill location outside of the community, and the connectivity between the landfill and the Dempster Highway. At the time of inspection, the SWDF could be accessed via the Dempster Highway at any time of the day. ENR notes that the new site is located in close proximity to the current SWDF site, and is also accessed using the same road off the Dempster Highway. ENR also notes that controlling the access to landfills was assessed as a high priority measure in ECCC Guidelines (see Table 2-2). It would appear that no design details on planned systems/structures to control access to the proposed new SWDF were specified in the proponent's Project Description letter. ECCC Guidelines (p. 65, or 77of 132) also refers to the importance of keeping waste from large industrial generators out of communities SWDF (eg. drill cuttings) as municipal SWDF are not designed, or approved by the Board, to handle such wastes, increasing long term liability to communities.</p> <p>Recommendation 1) ENR recommends that the Hamlet describe, in a resubmitted project description, the systems and/or structures planned to control access to the new SWDF site.</p>		
13	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends established management procedures are implemented to control access to the new SWDF (if any), and be outlined in resubmitted project description and the O&M Plan for the new SWDF. The new O&M Plan is to be submitted and approved by the Board.</p>		

14	Topic 8: Hazardous Waste Management	<p>Comment Further to above comment on hazardous wastes management, the ENR Inspector commented in the 2016 report on possibilities and/or opportunities for hazardous wastes collection and diversion away from Fort McPherson's SWDF. The report further identified that while proper signage was/is present at the current SWDF site, segregation practices were not adopted or successful. ENR notes that a metal shipping container is planned to be staged in the southern portion of the new SWDF, to act as both secondary containment and a system to permit ready transportation of hazardous wastes from the SWDF to an approved hazardous waste disposal facility. ENR commends the Hamlet for this useful and practical initiative, while cautioning the Hamlet to plan for adequate Spill Contingency measures at this storage containment. The Hamlet should also identify and implement measures to ensure that non-compatible hazardous wastes are not stored within the container.</p> <p>Recommendation 1) ENR recommends that the Hamlet's Spill Contingency Plan include procedures that will apply to the Hamlet's hazardous waste storage area.</p>		
15	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends that all operations and maintenance procedures for hazardous wastes, as well as overall waste segregation strategies, be outlined within the new SWDF O&M Plan which will be submitted for Board approval.</p>		
16	Topic 9: Hazardous Waste Management	<p>Comment All Proponents that generate hazardous wastes must be registered as a generator of hazardous waste in the NWT. The Guideline for the General Management of Hazardous Waste in the NWT defines hazardous waste and outlines the roles and responsibilities of generators, carriers, and receivers of hazardous waste in the NWT. The ENR, Environment Division (ED) registers generators, carriers, receivers, and tracks the disposal of hazardous waste generated in the NWT to registered receiving facilities on hazardous waste movement documents (manifest). The definition of hazardous waste includes all waste materials that are 'dangerous goods' according to the Transportation of Dangerous Goods Regulations, and any additional waste of special concern that the ED has determined hazardous until proven otherwise, including but not limited to: a) incinerator waste and/or residuals (including bottom ash and fly ash); b) any liquid or solid wastes contaminated with refined petroleum products; c) bilge wastes; d) vehicle or vessel servicing wastes e) drilling wastes; f) produced fluids (Glycol / Hydrocarbon / Inorganic Mixtures); g) tailings; and h) any hydrocarbon, lead, mercury or other forms of contaminated soils. The Guideline for the General Management of Hazardous Waste in the NWT and the Transportation of Dangerous Good Regulations may be found at the following sites: http://www.enr.gov.nt.ca/sites/enr/files/guidelines/general_management.pdf http://www.tc.gc.ca/eng/tdg/clear-menu-497.htm</p>		

		<p>Recommendation 1) If the Proponent is using, shipping or generating hazardous waste, they must register as a generator of hazardous waste in the NWT and track the disposal of hazardous waste from the site activities to registered receivers on hazardous waste movement documents provided by ENR. Please contact the Environment Division, ENR to register or for more information contact Mr. Mike Martin, Hazardous Substance Specialist, Environment Division by email (Mike_Martin@gov.nt.ca) or by phone (867) 767-9236 extension 53182.</p>		
17	Topic 10: Wind-blown Debris from the SWDF into Sewage Disposal Facilities	<p>Comment ENR's most recent inspection report indicated issues with wind-blown debris management, travelling from the SWDF and into the sewage lagoon & drainage stream/swale located downstream of the lagoon. According to the Engineering Diagrams, berms to the East and South are respectively 0.5 m and 0.75 m high. A berm with a fence built by the GNWT to the East is said to have been built (Project Description letter) since aerial images submitted with this application were taken; however, no associated height details were provided. The unbermed and unfenced side of the new SWDF facing the road is located on the same side as the Sewage Disposal Facilities and Shale pond. ENR's inspection report further refers to lack of SWDF covering procedures contributing to the availability of windblown debris (p. 5 and 16 of 18).</p> <p>Recommendation 1) ENR recommends the Hamlet provide further details, in a resubmitted project description, regarding systems/structure designs at the new SWDF to prevent off-site migration of solid waste debris into the Sewage Disposal Facilities, and the surrounding environment.</p>		
18	None	<p>Comment None</p> <p>Recommendation 2) ENR recommends that operations and maintenance routines relating to prevention of wind-blown debris (collection frequency, fence clearing, regular covering of solid waste procedures) be described within the resubmitted project description and the Hamlet O&M Plan for the new SWDF.</p>		
GTC Department of Cultural Heritage : Sharon Snowshoe				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	GTC Department of Cultural Heritage Comments	<p>Comment (doc) We have reviewed the above application, and have the following issue and concerns. There are boreal woodland caribou in the area, and the construction and operation of the dump should not affect these animals. There are multiple traditional trails through the area, which were used from at least 1900 to modern times. They were used for travelling and big game hunting for caribou and moose, among other reasons. Trails are often associated with undiscovered</p>		

		<p>archaeological remains, so if new ground will be disturbed during this project, the DCH requests that the wildlife monitor hired also has experience with archaeological remains and keeps an eye out for any archaeological artifacts. The lake to the west of the dump is Aat oo Zhit Van (Birch-in-lake). The surrounding area is considered good for berries, so any effects on berries should be mitigated during the construction and operation. The area is also known to be eagle and waterfowl habitat, and was traditionally used for trapping furbearers as well.</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 OCH and the Prince of Wales Northern Heritage Centre in Yellowknife must then be contacted.</p>		
Gwich'in Renewable Resources Board: Staff Gwichin Renewable Resource Board				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Fort McPherson-G03L3-001-new SWDF	<p>Comment (doc) The staff of the GRRB have reviewed this application and offer the following comments and recommendations on matters within its jurisdiction. Please refer to the letter attached.</p> <p>Recommendation Staff request more information concerning potential impacts to birds and wildlife and for more information concerning water drainage management. Please refer to letter attached.</p>		
2	Relevant legislation	<p>Comment Relevant legislation includes:</p> <ul style="list-style-type: none"> o Migratory Birds Convention Act http://laws.justice.gc.ca/eng/acts/M-7.01/ o NWT Wildlife Act https://www.justice.gov.nt.ca/en/files/legislation/wildlife/wildlife.a.pdf o NWT Wildlife Act Plain language Summary http://www.enr.gov.nt.ca/sites/enr/files/resources/wildlife_act_plain_language_summary_january_2018.pdf o NWT Species at Risk Act http://www.nwt-speciesatrisk.ca/sites/default/files/SpeciesatRisk.pdf o Federal Species at Risk Act http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html o Fisheries Act https://www.canlii.org/en/ca/laws/stat/rsc-1985-c-f-14/latest/rsc-1985-c-f-14.html o Gwichin Land Use Plan http://www.gwichinplanning.nt.ca/landUsePlan.html <p>Recommendation</p>		
3	Spills	<p>Comment The proponent shall ensure that any chemicals, fuel or wastes associated with the proposed project do not enter waters frequented by fish and to report all spills regardless of product</p>		

		and amount. Recommendation		
4	Closure and Reclamation	Comment GRRB staff recommend that a closure and reclamation plan for the old solid waste facility be submitted as a condition of the land use permit as per water license Part G: Conditions Applying to Abandonment and Restoration. A closure plan describes how the facility would be shut down and designed to prevent or minimize impacts to the receiving environment. For more information: https://mvlwb.com/resources/policy-and-guidelines Recommendation		
5	Impacts to Wildlife	Comment Landfills are known bear attractants. This creates a hazard for people and increases mortality to bears that may become habituated to this source of food and are then killed by wildlife officers. Grizzlies were assessed as a species of Special Concern under the federal Species at Risk Act in 2012. Are there measures in the site design to deter bears (ex. Enclosed perimeter, electric fencing) to reduce the probability of bear encounters with personnel? Recommendation		
6	Impacts to Wildlife	Comment o Staff have concerns about the potential for waterfowl to land on water retention or leachate ponds and become fouled with contaminants, particularly if there are hydrocarbon contaminated soils on the site. Are there measures in the site design to deter use of these ponds by waterfowl or to mitigate impacts? Recommendation		
7	Water Management	Comment There is a proposed new landfarm cell in addition to the existing landfarm cell. GRRB staff would like to know how the water drainage from the landfarm cells will be managed. Staff would also like more information concerning the integrity of the plastic liner currently in use. Are there plans to replace the liner to ensure drainage from contaminated soil doesn` t escape into the environment? Are the plastics used adequate to the temperature stress of our winters and UV stress of the summer sun? Recommendation		
8	Fencing	Comment The fencing height, materials or purpose is not specified. Staff would like more information. For example, it is not clear if the fencing is sufficiently high to trap wind blown litter, or if it is for some other purpose. Recommendation		