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STAFF REPORT

Prepared by Helga Harlander February 26, 2014

Application #	G03L3-001	Type	Type 'B' Water Licence - Renewal
Activity	Water withdrawal and deposit of waste for municipal purposes		
Location	Fort McPherson – various locations		
Proponent	Hamlet of Fort McPherson		

Application Summary

The Hamlet of Fort McPherson applied for renewal of the municipal water licence for a six year term. There are no actual changes proposed to the way the wastewater systems is being operated, but the Hamlet asks that the Board consider the 'incorporation of an explicit envelope to the waste treatment area'. (This means to officially recognize the area between the sewage lagoon and the river as part of the treatment area.)

Timeline

- January 23, 2014 - application received
- January 24, 2014 - application accepted as complete and sent to review organizations
- February 21, 2014 - deadline for comments
- February 28, 2014 - Board meeting (scheduled)

Discussion

Term of the Licence:

The first municipal water licence was issued to the Hamlet of Fort McPherson by the Northwest Territories Water Board in 1998 for a five year term. The GLWB renewed the water licence in 2003 for a four year term and then again in 2007 for a six year term. The Hamlet is currently asking for a six year renewal of the licence.

Some considerations regarding the term of the licence:

- The Hamlet typically requires the assistant of a consultant to prepare the background report for the renewal application. According to an estimate that was shared by the Hamlet, the proposed cost for the preparation of the current application documents was over \$20,000 each time a renewal is required.
- The term of the licence does not appear to influence compliance; compliance issues appear to be more related to staff turnover and capacity issues.
- Should any significant changes come up, the water licence can be amended by the Board.
- The Board can ask the Hamlet to undertake studies, the Board considers necessary, at any time during the term of the licence.

Effluent treatment system:

The files transferred from the NWTWB to GLWB contain records dating back to 1985. Questions regarding sewage treatment/disposal have come up regularly. Examples are:

- Discussion on continued use of sewage lake for piped sewage due to its proximity to the community (DIAND memo from 1985);
- Environment Canada points out lack of information re effluent quality, treatment capabilities of existing infrastructure, and sensitivity of receiving environment. (Review of WL application in 1997);
- Fisheries and Oceans notes that Sewage Lake is a fish bearing water body, and that fauna and usage are not well understood. (Review of WL application 1997);
- Environment Canada states that the 'activities have the potential to affect fish pursuant to Section 36(3) of the Fisheries Act. The section prohibits the deposit of deleterious substances in water frequented by fish. (Review of WL renewal application 2003);
- Environment Canada states that the 'Hamlet must ensure that any effluent discharged must also be in compliance with Section 36(3) of the Fisheries Act. (Review of WL renewal application 2007).

Studies were carried out in 2004 (Hamlet of Fort McPherson Waste Study) and 2005 (Fort McPherson Wetland Study). Both studies provided additional information regarding the effluent treatment system and also made recommendations for system improvements. There appears to have been no follow-up to the studies.

In order to get a better understanding of the environment the sewage is discharged to, the GLWB included a condition in the water licence in 2007 that required the Hamlet to 'submit terms of reference for a biophysical assessment' of the area to the Board and to DFO. (The Hamlet did not comply with this condition.) The main idea behind the biophysical assessment is to determine if there are fish in Sewage Lake and the lake the trucked sewage lagoon discharges into. It is important to know this for various reasons:

- Environment Canada has requested the information so it can assess water licence applications from the Hamlet and provide expert advice to the Board;
- Effluent quality at the trucked lagoon would have to be much better if it is discharged into a fish-bearing water body than if it is discharged into a wetland where it is filtered before it reaches the Peel.

Even though Environment Canada and Fisheries and Oceans Canada have expressed concern in the past about the lack of information, neither has objected to licences being issued in the past. (Neither of the departments has provided advice to the Board on the current application.)

The draft licence once again includes a condition to provide terms of reference for a biophysical assessment. The information gathered through that assessment will be required to determine whether or not it is appropriate to include the flow paths from sewage lake and the trucked sewage lagoon to the Peel river in 'an explicit envelope to the waste treatment area' as requested by the Hamlet.

Effluent Quality Criteria:

The effluent quality criteria, currently proposed, are essentially based on what the Hamlet can consistently achieve with the current lagoon treatment of the trucked sewage. They are similar to

what was in the licence from the beginning, but have been slightly adjusted on account of sample analyses over the last years.

To assign the appropriate effluent quality criteria, in accordance with the MVLWB water and effluent management quality policy, the information regarding the receiving environment is required.

Please note that there are no concerns at this point with the quality of the effluent by the time it reaches the Peel River.

Water Source:

People from Fort McPherson have commented on a decrease in the water level of Deep Water Lake over time. In late 2012 I prepared some information, which I forwarded to the Teltit Gwich'in Council and to the Hamlet. Considering the estimated volume of Deep Water Lake and the annual withdrawal of water by the Hamlet, it is unlikely that the municipal water withdrawal is the cause of the lower lake levels.

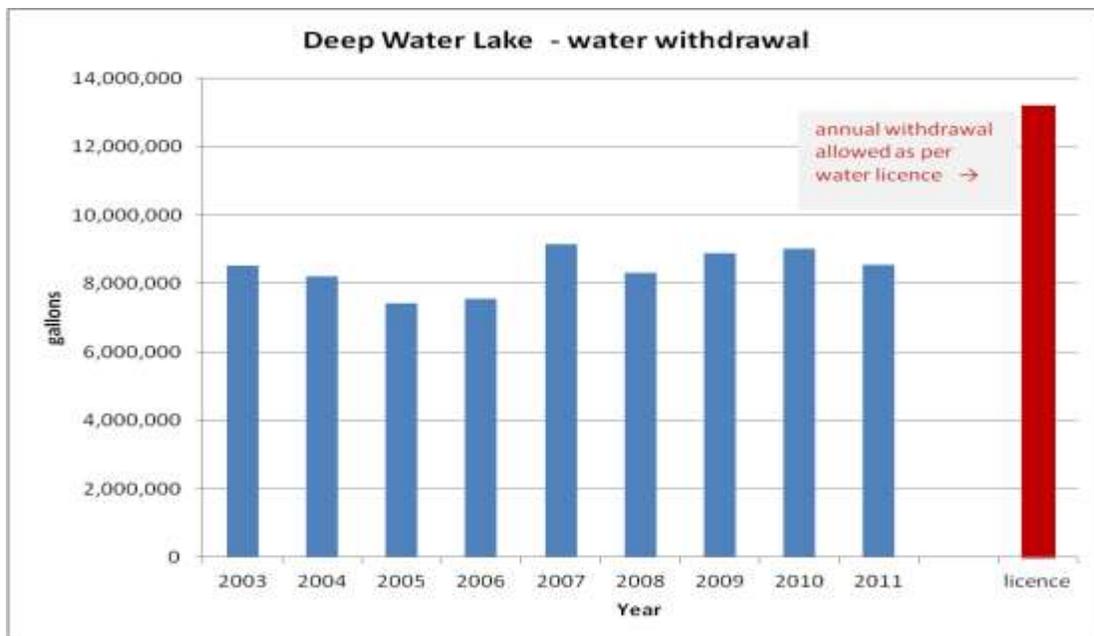
Water Licence G03L3-001 Hamlet of Fort McPherson

Estimated volume of Deep Water Lake: 75,000,000 m³ (**16,497,693,600 gallons**)
(Source: Deep Water Lake Watershed Management Plan, Appendix B Bathymetric Survey, Reid Crowther 2000)

Allowable water withdrawal as per water licence G03L3-001: 60,000 m³ (**13,198,155 gallons**)

The estimated volume of Deep Water Lake (16,497,693,600 gallons) is 1250 times the allowable yearly withdrawal (13,198,155 gallons).

Actual water withdrawal - yearly average from 2003 to 2011: 38,198 m³ (**8,402,397 gallons**)
(Source: Annual reports submitted to the GLWB by the Hamlet of Fort McPherson for the years 2003 to 2011)



Application Review:

Review comments were submitted by: Gwich'in Social and Cultural institute, Tetlit Gwich'in RRC, Aboriginal Affairs and Northern Development Canada, and GNWT Environment and Natural Resources. (See attached table for details.)

The GSCI remarked on extensive traditional use of the (sewage treatment) area. This had not been brought forward in the past. (The area has been used for this purpose for many years, and there has been no change in regard to the sewage treatment itself.)

DFO, who was a very active participant in the application review in 2007, did not provide any advice to the GLWB on this renewal application. The department informed the GLWB that the proponent is expected to perform a self assessment to determine if a review is required. The information was forwarded to the Hamlet's consultant.

Recommendation

Renew water licence G03L3-001, subject to the proposed terms and conditions, for a six year period.

Table 1 Summary of review comments for land use permit applications G03L3-001

Organization (Date received)	Comments	Disposition of comments (C5 = WL Part C Condition # 5)
GTC/GLR	no submission	n/a
GSCI (February 21, 2014)	<p>We have reviewed the above application against our heritage databases, and have the following information and concerns.</p> <p>The compliance issues relating to sewage treatment as noted in the materials submitted are very concerning to the GSCI. This is due to both the extensive traditional use of the area, and 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. There are possibly camps/cabins in the zone as well, although it is not known to the GSCI if these are in use. 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.</p> <p>There are three newly-recognized traditional Gwich'in names which should be used in future reporting. The lake which the garbage dump and sewage flows into is Aat'oo Zhit Van. The lake and creek through which the piped sewage drainage flows are Chii Tsal Van and Chii Tsal Van</p> <p>Gwinjik (see map, below). Additionally, Deep Water Lake has a traditional Gwich'in name of Tanahjidih, although Deep Water Lake remains the official name.</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 GSCI and the Prince of Wales Northern Heritage Centre in Yellowknife must then be contacted.</p>	<p>n/a</p> <p>-forward to Hamlet</p> <p>-forward to Hamlet</p> <p>- A1c), forward to Hamlet</p>
GRRB	no submission	n/a
GLUPB	no submission	n/a
Ehdiithat DGO	no submission	n/a

Ehdiithat RRC	no submission	n/a
Gwichya DGO	no submission	n/a
Gwichya RRC	no submission	n/a
Gwichya Gwich'in Band	no submission	n/a
Nihtat DGO	no submission	n/a
Nihtat RRC	no submission	n/a
Inuvik Native Band	no submission	
Tetlit DGO	no submission	n/a
Tetlit RRC (February 21, 2014)	<p>At the regular meeting of the Tetlit Gwich'in Renewable Resource Council on February 13, 2014, the application from G.L.W.B. regarding:</p> <p style="text-align: center;">Water License, Amendment of License or Renewal of License G003L3-001</p> <p>The following are recommendations for Hamlet of Fort Mc Pherson;</p> <ol style="list-style-type: none"> 1. License be approved for two year period until different water source is found for human consumption. 2. Monitor the water level of the lake. 3. Any changes should be reported to GLWB- asap. 4. Conduct a study on long term effects on the water being taken out of Deep Water Lake and how it effects the fish; plant vegetation, and animals. 5. Ensure that the water management plan is implemented and followed accordingly with yearly report. <p>The Board of Directors thanks you for providing this application for review, and if there are any questions, please call Georgina V. Neyando at the RRC office at 867-952-2330.</p>	<p>-forward to Hamlet, copy MACA</p> <p>-forward to Hamlet, copy MACA, GLA</p> <p>-forward to Hamlet, copy MACA, GLA</p> <p>-forward to Hamlet, copy MACA, GLA</p>
Environment Canada	no submission	n/a
Fisheries & Oceans	<p>Thank you for circulating Fisheries and Oceans Canada for review of the Hamlet of Fort McPherson renewal application for its municipal water licence.</p> <p>DFO has posted proponent self-assessment guidance on our website at www.dfo-mpo.gc.ca/habitat. Water taking criteria is listed along with measures to avoid harm (ie. Screening of intakes).</p> <p>We request that all proponents review the self-assessment criteria to determine if their project meet criteria. Only when works do not meet criteria does DFO request submission for review.</p> <p>DFO does not comment on sewage discharge.</p> <p>I trust that this is sufficient for your needs.</p>	forwarded to Stantec
AANDC (February 21, 2014)	<p>Topic: Ft McPherson Water Licence Renewal General comment</p> <p>Comment: In the water licence renewal application introductory letter, the Hamlet of Ft McPherson explains that there has been significant changes to the Hamlet's administration over the past few years. AANDC is pleased that the Hamlet was able to submit its water licence renewal application despite these hurdles. In its last report, the AANDC Water Resources Officer commended the Hamlet for efforts that are being made to improve the Waste Disposal Facilities. However, further delays to critical items/concerns that need to be dealt with will increase the level of contamination and result in increased expenses to the Hamlet of Fort McPherson. AANDC agrees with the water licence duration period of 6 years requested for the renewed water licence.</p> <p>Recommendation: To prevent the potential for further pollution and contamination of land and water, AANDC recommends waste management procedures be enhanced as conditions of the water licence through the requests of revised plans & operating procedures (waste management procedures).</p> <p>Topic: Ft McPherson Water Licence Renewal General comment</p> <p>Comment: The Hamlet has included for the Board's consideration, a distinct passive treatment envelope which includes the flow</p>	- 11

	<p>paths from the Sewage Lake and the trucked Sewage Lagoon. These combined flow paths converge at a discrete outlet near the Peel River. The Hamlet is requesting that the Board consider these entire areas for passive treatment as per the Canada Wide WSER framework.</p> <p>Recommendation: The overall incorporation of the entire treatment area for wastewater treatment requires further analysis and assessment against the proposed WSER framework. As such, AANDC offers the following comments to provide further context for the Board's consideration of this request. Where possible, recommendations have been made to the Board.</p> <p>Topic: Wastewater Systems Effluent Regulations (WSER) WSER under the <i>Fisheries Act</i> Comment: The WSER were developed under the <i>Fisheries Act</i>. The WSER currently are only in force since January 1st, 2013 in southern Canadian jurisdictions and the Yukon. The WSER was developed in part to improve wastewater effluent quality thus ensuring healthier fish and aquatic ecosystems, increased recreational use such as swimming and to account for an increasing value placed on ecosystems and water quality. Specifically, the WSER regulations define "Point of entry" in relation to final discharge point or an overflow point of a wastewater system as the <i>point where effluent is deposited in water frequented by fish via the final discharge point, as the case may be</i>. Recommendation: Therefore, one of the guiding principles of the WSER is to achieve effluent quality standards at the point that effluent is disposed in water (i.e. fish bearing waters) in order to improve aquatic ecosystems for healthier fish population was created under the <i>Fisheries Act</i>.</p> <p>Topic: Sewage Disposal Facilities upgrades WSER effluent quality standards and Ammonia Comment: The WSER offers a venue under which national monitoring and reporting is conducted for Suspended Solids (SS), Carbonaceous Biochemical Oxygen Demand (CBOD), Un-ionized ammonia (NH3), as well as Total Residual Chlorine (TRC). Note TRC will not apply to NWT communities as per the WSER. Ultimately, effluent quality results collected for these parameters will be compiled to inform the WSER and determine when (e.g. by 2020, 2030 or 2040 in southern jurisdictions & Yukon only) upgrades to Sewage Disposal Facilities will be required. The WSER will be administrated by establishing agreements with provinces and territories to streamline the administration and enforcement of the regulations. These agreements would aim to reduce duplication where possible for activities such as regulatory reporting. It is anticipated that, after the WSER are adopted in Canada's Far North and once agreements are established between WSER and NWT regulating authorities, the WSER effluent quality standards for SS, CBOD and NH3 will be reflected in water licences to which the WSER framework applies. WSER effluent quality standards adopted on January 1st, 2013 are as follows: CBOD (25 mg/L), SS (25 mg/L) and NH3 (1.25 mg/L). Recommendation: The NWT is currently exempted from the WSER as more research is being done to determine treatment standards for extremely cold climates. Results from this research will determine if current WSER effluent quality standards can be adapted to reflect wastewater treatment performance of a shorter treatment season. AANDC notes that Total Ammonia is currently monitored under the Hamlet of Fort McPherson's water licence, but there is currently no limit preventing discharge for ammonia (no ammonia EQC).</p> <p>Topic: Current Sewage Disposal Facilities System Bio-physical assessment overdue Comment: Despite recurring non-compliance issues experienced at the Sewage Lagoon (further description below), samples taken at the end of the ultimate flow path of the effluent discharge at SNP 1696-6 (the location prior to entering the Peel River) are well within water licence and existing WSER limits. However, a big issue remains. The Two Kilometre lake, located in the middle of the treatment area (just after the anaerobic Sewage Lagoon) is relatively deep (5 to 7 metres) with a distinct shoreline, and could potentially be fish bearing (FSC, 2005). In its 2005 report, FSC stated that current lagoon configuration had then been in use for wastewater treatment for over thirty years, and that therefore any possible effects from the lagoon effluent on plant and fish life in subsequent water bodies (especially on the Two Kilometre Lake) would already have occurred. However, AANDC notes that around that same time period (i.e. 2003) a fish sighting occurred in the discharging stream prior to entering the Peel River, during an Earth Tech site inspection. This raises the question of whether the immediate receiving body is a wetland or a lake. A Bio-physical assessment of the environment receiving sewage effluent discharge, namely Sewage Lake and the lake and wetlands downstream from the trucked Sewage Lagoon were added to Ft McPherson water licence requirements, Part B - Item 10, during last water licence renewal in 2007. AANDC notes that this assessment has not yet been completed.</p>	<p>-forward to Hamlet</p> <p>-forward to Hamlet, B9</p> <p>-forward to Hamlet, SNP B1/B2/B4</p>
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	<p>Recommendation: AANDC understands that lakes are used in the NWT as part as sewage collection and treatment systems. However, AANDC's understanding is that only lakes where fish life is absent can or should be used as part of a wastewater treatment system as per the existing WSER framework. Any further delays in conducting the Bio-physical assessment of Two Kilometer Lake may result in further contamination and risk to the aquatic environment.</p> <p>As with the current wastewater treatment system, DFO protocol states that when in doubt, fish are to be considered as present. Furthermore, the above mentioned WSER definition of "Point of entry" refers to "<i>point where effluent is deposited in water frequented by fish</i>".</p> <p>AANDC therefore recommends that approval to current wastewater treatment system envelope only be considered conditional on the completion of the Bio-physical assessment. Once completed the system can be assessed and potentially approved by Environment Canada (WSER) and Department of Fisheries and Oceans.</p> <p>Topic: Current Sewage Disposal Facilities System Compliance status relating to the Trucked Sewage Lagoon</p> <p>Comment: Fort McPherson uses two very different sewage treatment and disposal systems. Sewage Lake (aerobic lagoon) receiving piped sewage and provides good treatment, while ammonia concentrations in the trucked Sewage Lagoon (anaerobic lagoon) remains very high as the effluent undergoes little or no nitrification (Earth Tech - 2004).</p> <p>Data compiled in Stantec's background document reported ammonia results between May 2004 and October 2012 at SNP 1696-2) oscillating mainly between 30-45 mg/L. During that same period, results did not meet compliance limits for BOD (>12 times), SS (>5 times) and Faecal coliforms (>6 times). These concentration issues have also contributed to overcapacity issues (freeboard) on a yearly basis, which require emergency decants at times.</p> <p>An Action Plan was required in the water licence in an effort to maintain the freeboard in the sewage lagoon (Part B, Item 9) during last water licence renewal. As well, requirement for a Detailed Plan outlining the steps to be taken to improve sewage treatment efficiency at the trucked sewage lagoon were included in Part B, Item 10. These two items were identified as non-compliance points in the most recent AANDC inspection report conducted in July 2013.</p> <p>Recommendation: The Hamlet of Fort McPherson must practice due diligence in its responsibility to reduce and control pollutants from being introduced into the receiving water bodies. Maintenance of effluent discharge concentrations below water licence limits is key, however, the point of compliance could be potentially be changed if a Bio-physical assessment if conducted in short order in Two Kilometer Lake.</p> <p>AANDC recommends that plans and assessments required in Part B be completed and submitted. The results of these plans may require updates to the Hamlet's O&M Plan, where appropriate.</p> <p>AANDC recommends that Part I of the current water licence which refer to Conditions Applying to Operation and Maintenance, should be also be updated to include "Steps to be taken to maintain the specified freeboard" (Part B.9) and "Steps to be taken to improve sewage treatment efficiency at the trucked sewage lagoon" (Part B.11).</p> <p>Topic: Sewage Disposal Facilities Upgrades Upgrades</p> <p>Comment: In their 2012 Annual Report, the Hamlet briefly indicated its intention to act on the Sewage lagoon issue, specifically a proposal to, "increase the freeboard at the Lagoon is being considered" (Under Modifications/Major maintenance).</p> <p>Coupled with this AANDC suggests that until the Bio-physical assessment is completed, the Hamlet should consider options to address wastewater treatment issues of the current system and/or modify the actual wastewater treatment configuration or discharge location (specifically at the trucked sewage pit).</p> <p>This assessment could include, as recommended in the 2005 FSC report (Option C), construction of a short engineered wetland above the Two Kilometer Lake. Another option would be to re-locate of the sewage lagoon outfall area to the wetland area past the outfall of Two Kilometer Lake.</p> <p>Recommendation: As suggested in the Hamlet 2012 Annual Report, AANDC recommends the Hamlet move forward to implement the necessary modifications to improve the treatment and compliance of their sewage lagoon facility.</p> <p>Topic: Surveillance Network Program - WSER parameters Un-ionized ammonia</p> <p>Comment: Currently, the water licence request for monitoring of Total Ammonia Nitrogen is under Part B.1 and B.2 of the Surveillance Network Program section, located at the end of the licence.</p> <p>The WSER requires monitoring of Un-ionized ammonia, which exists as a fraction of Total Ammonia [Total Ammonia = Un-ionized</p>	<p>-forward to Hamlet, B9</p> <p>-forward to Hamlet & - B9, D3, D6, D7, I1</p> <p>- forward to Hamlet</p>
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	<p>Ammonia (NH3) + Ionized Ammonia (NH4+)]. However, the Un-ionized fraction of ammonia can be calculated from results obtain for Total Ammonia, considering the pH and temperature of the sample. Recommendation: To harmonize the upcoming WSER sampling requirements and ensure that an limit can be determined at the licence approval, AANDC recommends that the monitoring requirement for Un-ionized ammonia replaces Total Ammonia-Nitrogen within the water licence or and EQC be incorporated for Un-ionized and Total Ammonia-Nitrogen.</p> <p>Topic: Surveillance Network Program - WSER parameters Discontinuation of BOD sampling upon BOD/CBOD trend analysis submission Comment: AANDC acknowledges the Hamlet for integrating CBOD into their sampling routine in 2011. This will ensure that the Hamlet meets the requirements of the WSER if and when they come into effect for the North. However, once results for simultaneous sampling of both BOD and CBOD will have been collected for period of time (a minimum period of 3 years) it is possible to establish a correlation between the two both BOD and CBOD. AANDC would support the discontinuation of BOD as a sampling requirement of the water licence provided a correlation analysis is completed between BOD and CBOD for 2011, 2012 and 2013. Recommendation: AANDC recommends for the discontinuation of BOD as a sampling requirement of the water licence. AANDC suggest that a correlation analysis is completed between BOD and CBOD for 2011, 2012 and 2013.</p> <p>Topic: Surveillance Network Program Reporting results of 150% over limits Comment: Maximum Average Concentration for Suspended Solids (SS), Biological Oxygen Demamand (BOD) and Feecal Coliforms are currently required to meet effluent quality standards of the water licence at the decant structure of Lagoon Lake and the outflow of Sewage Lake. If/when parameters are above limits at SNP 1696-2 and SNP 1696-3, the Hamlet is responsible to inform the Board that water licence limits are not being meet. To reflect this and as done in other NWT municipal licences, a condition should be added to Part D as followed: "The Licensee shall address any effluent quality results that exceed 150 percent of the Maximum Average Concentration standards in writing to the Board." Recommendation: AANDC recommends that a condition be added to Part D of the water licence (for consistency in municipal licences) to clarify the Hamlet's responsibility in reporting results that would exceed max. average and approach max. grab EQC as found in licence.</p> <p>Topic: Drinking Water Source – Protection Use and Access to Drinking water source Comment: The <i>Deep Water Lake Management Plan</i> (DWLMP) was drafted by Kavik-AXYS Environmental Consulting Ltd in 2001 to provide MACA with a strategy for managing the Deep Water Lake Watershed as a long-term source of potable water for Fort McPherson. The DWLMP specified that at that time (2001), a land lease was being negotiated between MACA and the Gwich'in, which was to ultimately determine the regulatory responsibilities for land management practices in the Deep Water Lake watershed. Past inspection reports have expressed concerns overs the potential effects that recreational activities (ATV, skidoos, etc.) as potential contaminant sources for the Fort McPherson drinking water supply. Recommendation: AANDC recommends that the Hamlet notify its residents of the potential risk of contamination of their drinking water source by recreaional activities near or within the Deep Water Lake watershed.</p> <p>Topic: Operations and Maintenance Plan (O&M) Updates Comment: The Hamlet O&M Plan (on file with the Gwinch'in Water Board) contains procedure for management of Sewage disposal facility, Solid Waste Disposal facility and some details on hazardous/special waste management practice such as asbestos. As the O&M Plan was prepared in 1997, an updated version including all changes in operations or technology at the Hamlet should be required. To support Ft Mc Pherson staff, the O&M plan should also include details/procedures relating to: - Erosion prevention/management of the sewage lagoon chute - Steps to monitor and maintain the specified freeboard in the sewage lagoon - Segregation of various types of wastes at the landfill w/ segregation piles on a map - Waste compaction practices and frequency - Fluid removal from landfilled vehicle</p>	<p>- SNP B1 & B2</p> <p>- SNP B1/B2//B3/B4</p> <p>- D2, B1f)</p> <p>-forward to Hamlet, copy MACA, GLA</p>
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	<p>- Burning area operations to prevent runoff contamination - Shipment procedures for batteries or any other wastes offsite Recommendation: To support the Hamlet staff, AANDC recommends that further descriptions and instructions related to Operation and Maintenance of the Sewage Disposal Facilities or the Solid Waste Disposal facilities. AANDC recommends that condition the O&M plan be updated to include changes in operations and technology since 1997.</p> <p>Topic: Spills Prevention and Contingency Planning (SCP) Management Plans to support the Hamlet Comment: Spills are serious incidents as they can be a source of pollution within the community which ultimately can affect the people and the environment. Section 8.0 of Stantec's Background Report indicates that numerous spills have occurred at the Deep Water Lake intake facility and Solid Waste Disposal facility. Improvement of spills reporting and clean-up reporting and hydrocarbon management at the landfill are required. The Spill Contingency Plan (SCP) should indicate the proposed procedures for notifying agencies and cleaning up spills. A proper SCP should help to prevent contamination of land and water. A SCP should be a requirement of the renewal water licence. The Hamlet should rely on AANDC's 2007 Guidelines for Spill Contingency Planning. The guidelines outline the various sections & components which are available online at http://www.aandc-aandc.gc.ca/eng/1100100024236/1100100024253#aB . A ready-to-fill Spill Contingency Plan template can be provided to the Hamlet to assist in the development of the plan. However, if additional assistance is required, please contact AANDC Water Resources Division Jeanne Arsenault @ 867-669-2658 or AANDC North Mackenzie District - Inuvik, Water Resource Officer (Inspector) Jan Davies at 867-777-8909. Recommendation: AANDC recommends a condition to be added to the water licence, under Part F, that requires the submission of a SCP for review and approval by the Board. This contingency plan should contain details regarding spill preventive measures such as secondary containment, spill response equipment, spill inspection frequencies, spill reporting, etc. The SCP should be reviewed and updated regularly during the term of the licence, potentially every three years.</p> <p>Topic: Closure and Reclamation Plan Closure and Reclamation - to replace Abandonment and Restoration Comment: Over the years, the terms "Abandonment and Restoration" have been replaced by "Closure and Reclamation". It is therefore recommended that reference to Abandonment and Restoration within the water licence (Part G) be replaced with the terms "Closure and Reclamation". Recommendation: AANDC recommends that the terms Closure and Reclamation be used within the water licence.</p> <p>Topic: Amalgamation of Water Boads Website Consistency amongst various Boards Comment: Various agencies including AANDC rely increasingly on Public Registries to quickly and efficiently access the necessary documents and review information related to the regulatory process. AANDC notes that the online registry for the GLWB does not include much information on the water licences and management plans for authorizations granted by the Board. While two documents were sent to reviewers for the current water licence renewal process (i.e. water licence application, and, Background report), AANDC notes that no information exists on the Public Registry for this water licence other than the water licence application and the background report from last water licence renewal in 2007. No annual reports, inspection reports, management plans, etc. are available for the Hamlet online. AANDC believes that the Public Registry should be used as a repository of information where past and present documents are made available to the public as they are submitted to the Board. This would be done in the same manner as currently done with SLWB, MVLWB, WLWB as well as with NWT Water Board webpages and/or website. Recommendation: AANDC respectfully suggests that the necessary documents related to all Board authorizations be posted to the online registry. AANDC understands that challenges in getting older documents posted but recent documents could be scanned and posted. Important information should be posted such as annual reports, past studies, management plans, Spill Contingency Plan, etc.</p>	<p>-partially addressed in I1</p> <p>- F1, B11)</p> <p>-not addressed ('Abandonment' and 'restoration' are the terms used in the Northwest Territories Waters Act and the Northwest Territories Waters Regulations.)</p> <p>- n/a (Does not constitute expert advice re the water licence.)</p> <p>FYI - All documents are available in the Public Registry, as required under legislation. Electronic copies were forwarded to Water Resources Division on request, in a timely manner. Inspector has copies of all relevant documents also as they are either submitted to the inspector at the same time as they are submitted to the board, or forwarded by board staff.</p>
MVLWB	no submission	n/a
MVEIRB	no submission	n/a
GNWT ENR (February 21, 2014)	The Department of Environment and Natural Resources has reviewed the application at reference based on its mandated responsibilities under the <i>Environmental Protection Act</i> , the <i>Forest Management Act</i> , the <i>Forest Protection Act</i> and the <i>Wildlife Act</i>	

and has the following comments and recommendations for the consideration of the Board.

Topic 1: Solid Waste Disposal Facility

Comment(s):

- ENR notes that the Hamlet of Ft. McPherson (the Hamlet) has not provided an Operations and Maintenance Plan in the application. ENR also notes that the Hamlet has not identified in the application the steps that it is taking to rectify this deficiency.
For use in the NWT, the *Guideline for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the Northwest Territories*, is endorsed by the Departments of Municipal and Community Affairs (MACA) and Environment and Natural Resources (ENR), Government of the Northwest Territories. It provides specific advice in this regard, has been developed specifically for use in the NWT, and provides definitions and uses terminology and instructs on common procedures that will provide all stakeholders certainty and clarity when discussing, planning for, and operating the Hamlet's SWDF. For specific guidance on the development of an O&M Plan, consult the "*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories*".
- 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 Department of Environment and Natural Resources (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 Environment Division has determined hazardous until proven otherwise.
It is understood the disposal facility is currently operating without permanent supervision or tipping fee's and may be accepting hazardous waste from the industrial, commercial, and institutional sector. ENR has produced the guide to developing hazardous waste management plans. The guide outlines a decision making format for determining what hazardous wastes are acceptable and unacceptable in a disposal facility.

Recommendation(s):

- 1) In order to ensure that its purpose is to develop operations and maintenance requirements specific to Ft. McPherson sourced municipal solid waste, ENR recommends that an updated Operations and Maintenance Plan, specific to Ft. McPherson's municipal water use and waste deposits, is prepared and submitted to the Board for its approval. ENR recommends that the Hamlet consult the "*Guideline for the Planning, Design, Operations and Maintenance of Modified Solid Waste Sites in the Northwest Territories*" and the "*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories*" in developing this plan. Once the plan is developed, ENR recommends that it is made available to Hamlet staff managing the SWDF and that it is implemented.
- 2) Please continue to develop a Hazardous Waste Management Plan that identifies the hazardous wastes that are accepted and not accepted at the disposal facility
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. ENR's Environment Division 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).
Please contact the Environment Division, ENR directly for more information. Contact Mr. Gerald Enns, Hazardous Waste Specialist by email (Gerald_Enns@gov.nt.ca) or by phone (867) 920-8044.
- 3) That all plans are forwarded to ENR for review prior to Board approval.

Comments and recommendations were provided by ENR technical experts in Environment Division and the Inuvik Region and were coordinated and collated by the Environmental Assessment and Monitoring Section (EAM).

-forward to Hamlet, 11

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-Note: Board staff forwards plans to ENR for review & comment.

	If you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at 920-6118 or email at patrick_clancy@gov.nt.ca .	
GNWT ECE –PWNHC	no submission	n/a
GNWT – ITI	no submission	n/a
GNWT – Env. Health	no submission	n/a
GNWT - MACA	no submission	n/a