

## Staff Report

<b>Applicant:</b> Hamlet of Fort Providence	
<b>Location:</b> Fort Providence, NT	<b>Application:</b> MV2016L3-0001
<b>Date Prepared:</b> June 27, 2016	<b>Meeting Date:</b> July 7, 2016
<b>Subject:</b> Type B Municipal Water Licence Renewal	

### 1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board):

- a) An Application (MV2016L3-0001) submitted by the Hamlet of Fort Providence (Hamlet) for the renewal of their existing Type B Water Licence (Licence) MV2006L3-0002 for the use of water and disposal of sewage and solid waste for municipal undertakings; and
- b) Seek confirmation on a Preliminary Screening exemption.

### 2. Background

- April 6, 2016 – Licence renewal Application received (MV2016L3-0001);
- April 12, 2016 – Application fee received;
- April 13, 2016 – Application deemed complete;
- April 21, 2016 – Application sent for review;
- May 2, 2016 – Draft Licence terms and conditions sent for review;
- May 30, 2016 – Reviewer comments due;
- June 9, 2016 – Proponent responses submitted; due to a technical error responses were not visible until June 13, 2016;
- **July 7, 2016 – Application presented to the Board;** and
- July 9, 2016 – MV2006L3-0002 expires.

### 3. Discussion

On April 6, 2016, the Hamlet of Fort Providence applied for a renewal of their existing Type B Licence MV2006L3-0002 for the use of water and deposit of sewage and solid waste for municipal undertakings (attached).

#### Background on water supply and waste management infrastructure

Water use:

- Water is drawn from the Mackenzie River through an incline shaft intake. However due to ongoing intake problems, the Hamlet periodically switches back to an online intake system that includes three gravity intakes to a wet well.
- River water is treated at the Water Treatment Plant (WTP) located at the southeast end of the Hamlet (please refer to Figure 1 attached).
- Waste material from the water treatment process, including backwash from the filters and sediment from the wet well and water treatment process, is pumped towards the riverbank and flows into the Mackenzie River.

#### Sewage:

- The Sewage Disposal Facility (SDF) is located approximately 1.2 km east of the Hamlet and consists of five cells interconnected via metal culverts (please refer to Figure 2 attached).
- The system is a facultative lagoon which discharges into a wetland area to the north. From the wetland, water ultimately drains to the Mackenzie River.

#### Solid waste:

- The Solid Waste Disposal Facilities (SWDF) is shown in Figure 3 (attached) and includes three locations;
  - Domestic solid waste is deposited just south of the sewage lagoons on the west side of the access road.
  - Construction waste is deposited in an unfenced area on the east side of the access road, across from the domestic waste area.
  - A pile of contaminated soil is located north of the construction waste area.

All facilities are located on territorial lands and are within municipal boundaries.

#### Preliminary Screening

To be exempt from a preliminary screening, a development must meet the requirements outlined in Schedule 1, Part 1, section 2 of the Exemption List Regulations annexed to subsection 143(1) of the *Mackenzie Valley Resource Management Act* which states:

A development, or part thereof, for which renewal of a permit, licence or authorization is requested that

- a) has not been modified; and
- b) has fulfilled the requirements of the environmental assessment process established by the *Mackenzie Valley Resources Management Act*, the *Canadian Environmental Assessment Act* or the *Environmental Assessment Review Process Guidelines Order*.

On July 7, 2006, a preliminary screening was approved by the Board when Licence MV2006L3-0002 was issued (attached).

As per the Application for Licence MV2016L3-0001, the scope of the development has not changed. However, there is a change in the way the Hamlet depicts the Solid Waste Disposal Facilities between the 2006 and 2016 applications:

- 2006: Figure 10, submitted with the 2006 Application, only depicts the domestic solid waste site (see 2006 Application appendix attached). This figure was used to define “Solid Waste Disposal Facilities” in Part A of Licence MV2006L3-0002. Section 4.3 of the Application for MV2006L3-0002 (attached) mentions the construction waste site and contaminated soil pile as components of the Solid Waste Disposal Facilities, however they are not depicted in any figures or maps.
- 2016: Figure 3, submitted with the 2016 Application depicts all three locations: the domestic waste area, construction waste area, and the contaminated soil pile (see the 2016 Application - Figure 3: Domestic Solid Waste and Sewage Treatment Lagoon Site).

The construction waste area and contaminated soil pile are likely to have been considered in the preliminary screening conducted for MV2006L3-0002, however they were not included as part of the figure that defines the Solid Waste Disposal Facilities.

#### The term of the Water Licence

Section 26(2)(a) of the *Waters Act* speaks to the term of a Licence. The majority of the Type B municipal water licences issued by the Board have 10 year terms. The Hamlet requested a Licence term of 10 years in their comments on the draft Licence.

#### Plans and submissions associated with the Water Licence

A Sewage and Solid Waste Facility Operation and Maintenance Plan was submitted on December 10, 2015, under the existing Licence MV2006L3-0002. This submission did not undergo review at that time as the Hamlet indicated that the renewal Application was forthcoming. A Spill Contingency Plan (SCP) was included as a subsection of this Plan.

#### Infrastructure issues

- Water Treatment Plant: issues with the water intake system as noted above.
- Sewage lagoons: the sewage discharge ramp is defective and in need of repair.
- Solid Waste Disposal Facilities:
  - Ponded water accumulates in the domestic and construction waste areas;
  - There is no fencing or signage at the construction waste area and waste is being deposited without segregation; and
  - The SWDF is reaching capacity: the Solid Waste Site Preliminary Evaluation conducted in 2011 by Dillon Consulting Ltd. (attached) and submitted under MV2006L3-0002 estimated remaining capacity at 3-5

years and recommended commencement of planning for an expansion or relocation (see Section 6 of the evaluation).

#### **4. Comments**

Not applicable.

#### **5. Reviewer Comments**

By May 30, 2016, comments and recommendations were received from:

- Environment and Climate Change Canada (ECCC);
- Government of the Northwest Territories - Environment and Natural Resources (ENR);
- Fisheries and Oceans Canada; and
- Board staff.

The Hamlet responded on June 9, 2016; however, their responses were not visible until June 13, 2016 due to a technical issue with the Online Review System.

The reviewer comment summary table (attached) presents the concerns identified through the review of the Application and draft Licence.

#### **6. Security**

Not applicable.

#### **7. Conclusion**

The draft Licence (attached) contains recommended terms and conditions based on current requirements, municipal Licences that have been issued recently (Fort Resolution and Fort Simpson), and reflects reviewer concerns and Board staff recommendations. A standard list of terms and conditions for water licenses has not yet been developed.

Board staff concludes that the conditions contained within this draft should mitigate the potential environmental impacts this development may have on land and water.

Based on this review, Board staff concludes that the Sewage and Solid Waste Facility Operation and Maintenance Plan is deficient and should not be approved. This Plan should be separated into two standalone plans to conform with operation and maintenance templates and other water licenses for the Solid Waste Disposal Facilities and Sewage Disposal Facilities. As the Spill Contingency Plan was included as a subsection of this Plan and is deficient, it should also not be approved; a standalone Spill Contingency Plan should be required.

Please refer to the draft Reasons for Decision for a detailed explanation of Licence conditions (attached).

## 8. Recommendation

Board staff recommends the Board:

- a) Confirm the project is exempt from preliminary screening.
- b) Approve the Type B Water Licence with proposed conditions and a term of 10 years.

## 9. Attachments

- [MV2016L3-0001 - Water Licence Application](#)
- [Sewage and Solid Waste Facility Operation and Maintenance Plan](#)
- [Preliminary Screening Report for MV2006L3-0002](#) dated July 7, 2006
- Figure 10: Domestic Solid Waste Site (taken from the MV2006L3-0002 application)
- [MV2006L3-0002 - Water Licence Application](#)
- [Solid Waste Site Preliminary Evaluation, Fort Providence](#) (2011, Dillon Consulting Ltd.)
- Reviewer Comment Summary Table
- Figure 1: Water and Waste Facility Locations
- Figure 2: Sewage Treatment Lagoon System
- Figure 3: Domestic Solid Waste and Sewage Treatment Lagoon Site
- Draft Water Licence cover page
- Draft Water Licence conditions
- General Procedures (Water Licence)
- Draft Reasons for Decision
- Draft Decision Letter from the Board

Respectfully Submitted,

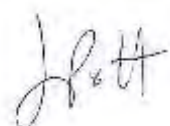
Reviewed by,



Miki Ehrlich  
Regulatory Officer



Heather Scott  
Technical Advisor



Jen Potten  
Regulatory and Office Manager

## Review Comment Table

Board:	MVLWB
Review Item:	Hamlet of Fort Providence - Municipal Water Licence Renewal Application (MV2016L3-0001)
File(s):	<a href="#">MV2016L3-0001</a>
Proponent:	Hamlet of Fort Providence
Document(s):	<a href="#">MV2016L3-0001 - Fort Providence - Municipal Water Licence Renewal Application</a> (1 MB) <a href="#">MV2016L3-0001 - Fort Providence - Sewage and Solid Waste Facilities Operations and Maintenance Plan</a> (1 MB) <a href="#">MV2006L3-0002 - Fort Providence - Preliminary Screening Report</a> (110 KB) <a href="#">MV2016L3-0001 - Fort Providence - DRAFT Water Licence</a> (172 KB)
Item For Review Distributed On:	Apr 21 at 17:01 <a href="#">Distribution List</a>
Reviewer Comments Due By:	May 30, 2016
Proponent Responses Due By:	June 9, 2016
Item Description:	<p>The Hamlet of Fort Providence submitted a renewal application for their Type B municipal Water Licence (<a href="#">MV2006L3-0002</a>) on April 6, 2016. The existing Licence will expire on July 9, 2016. The Hamlet is requesting a ten year term.</p> <p>The Board will consider whether to deem the application exempt from a preliminary screening pursuant to Part 1(2) of Schedule 1 of the Exemption List Regulations of the <i>Mackenzie Valley Resource Management Act</i>. The Preliminary Screening Report completed for MV2006L3-002 on July 7, 2006 has been included in the list of documents below for review.</p> <p><b>May 2, 2016 update:</b> A draft Water Licence has been posted in the list of documents below for review and comment.</p> <p>Board staff encourages reviewers to provide comments on all aspects of the proposed Water Licence renewal application. If you have questions or comments regarding this review or the Online Review System please contact Miki Ehrlich at (867)766-7469 or <a href="mailto:mehrlich@mvlwb.com">mehrlich@mvlwb.com</a>.</p>

<b>General Reviewer Information:</b>	In addition to the email distribution list, the following organizations received review materials by fax:
	<p>Fort Liard Metis Local #67 - Ernie McLeod, President - (867)770-4573</p> <p>Fort Simpson Métis Local #52 - Marie Lafferty, President - (867)695-2040</p> <p>Hay River Metis Council - Karen Lafferty, President - (867)874-4472</p> <p>Northwest Territory Métis Nation - Garry Bailey c/o Tim Heron, NWTMN IMA Coordinator - (867)872-3586</p>
<b>Contact Information:</b>	<p>Heather Scott 867-766-7463</p> <p>Jen Potten 867-766-7468</p> <p>Miki Ehrlich 867-766-7469</p>

### Comment Summary

Hamlet of Fort Providence (Proponent)				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	General File	<b>Comment</b> <a href="#">(doc)</a> (Submitted after Due Date) revised figure 3 as noted in proponent response <b>Recommendation</b>		Noted.
2	General File	<b>Comment</b> <a href="#">(doc)</a> (Submitted after Due Date) revised figure 1 as noted in proponent response <b>Recommendation</b>		Noted.
Environment and Climate Change Canada: Bradley Summerfield				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	General File	<b>Comment</b> <a href="#">(doc)</a> ECCC cover letter <b>Recommendation</b>		
2	Municipal water licence application (April 2016): Management of WTP backwash water	<b>Comment</b> Section 3.4 of the water licence application describes the water treatment method. Water treatment involves a backwash operation which occurs once a day. The backwash water is pumped to a discharge outfall on the river bank, and is disposed of in the Mackenzie River. The volume of backwash water is approximately 5000 L (5 m3) / day. The chlorine concentration is stated to be 0.02	<b>June 13:</b> Testing of backwash discharge can be done as part of normal operations of the WTP, and contingency measures put in place.	Condition E.4 requires submission of an Operation and Maintenance Plan for the Water Treatment Plant within one year of issuance. Schedule 2,

		ppm or less, however there is no mention of verifying the chlorine concentration prior to discharge of backwash. <b>Recommendation</b> Testing of backwash discharge should be done to ensure that it meets the Fisheries Act requirement that any deposits to waters frequented by fishes be non-deleterious. Contingency measures should be available to manage backwash water that does not meet discharge criteria.		item 3 requires the Plan to include discharge criteria for backwash water that the facility will meet (i.e. 0.02 mg/L) as stated in the Licence application, how it will be tested, how discharge volumes will be tracked, and what contingency measures will be employed to manage backwash water that does not meet discharge criteria.
3	Municipal water licence application (April 2016): Figure 1 (Water and Waste Facility Locations)	<b>Comment</b> As per page 2 of the O&M Plan, sewage effluent enters a wetlands area within the industrial area northeast of the community and ultimately discharges into the Mackenzie River. The satellite photo showing the lagoons and wetlands does not show where the final discharge to the Mackenzie River is. It is not clear whether the flow travels through the industrial area. If so, there is potential for the industrial area to contribute releases (including discharge, leachate, runoff, spills) that could impact the final quality of the wastewater effluent in the wetlands area. <b>Recommendation</b> Provide a map showing clearly where the sewage effluent flow path is from the lagoon to the Mackenzie River. Describe what monitoring is in place to detect any releases from industrial areas.	<b>June 13:</b> A revised Figure will be provided to show the sewage flow path. There is currently no monitoring in place to detect any releases from industrial areas.	Figure has been provided.
4	Water licence Part D: Conditions Applying to Waste Disposal; Condition 6, regarding Effluent Quality Criteria (EQC) at SNP station 1412-2	<b>Comment</b> As per the water licence, all effluent from the Waste Disposal Facilities at Surveillance Network Program station number 1412-2 shall meet the effluent quality criteria (EQC). <b>Recommendation</b> Wastewater effluent should be sampled and analyzed for compliance with water licence effluent quality criteria (EQC) prior to discharge/release.	<b>June 13:</b> Agree.	Condition D.8 requires sampling results to be provided to an inspector and the Board no later than 5 days prior to discharge and states that

		Effluent that does not meet the discharge criteria should be retained and managed until the EQC are met. All effluent discharges must meet the Fisheries Act requirement that any deposits to waters frequented by fishes be non-deleterious.		<p>discharge shall not commence until authorized in writing by an Inspector.</p> <p>Condition E.3 requires a revised O&amp;M Plan for the Sewage Disposal Facilities to be submitted within one year of issuance. Schedule 2 requires information on effluent discharge to be included in the Plan, including measures that will be taken to manage effluent that does not meet EQCs.</p>
5	Water licence Part D: Conditions Applying to Waste Disposal; Condition 15	<p><b>Comment</b> The Board staff requested input on Condition 15, i.e., proposed conditions to address management of commercial and industrial wastes produced outside of municipal boundaries.</p> <p><b>Recommendation</b> As the current solid waste facility is projected to reach capacity within the next 10 years, it would be preferable to continue to operate the Solid Waste Facility (SWF) as a strictly municipal operation. As such option 1 (i.e., industrial, commercial and institutional waste from outside local boundaries shall not be accepted) is the preferred option in order to extend the SWF life. Landfill expansion is discussed in the O&amp;M Plan, however, acceptance of commercial and industrial waste from outside local boundaries is not recommended despite the possible expansion. Acceptance of such materials would shorten the landfill life and would require a higher degree of landfill monitoring due to the increase of possible contaminant sources.</p>	June 13: Agree.	Condition D.3 requires Inspector approval for the acceptance of sewage or solid waste from industrial, commercial and institutional operators working outside of the local government boundaries.

6	Water licence conditions: Schedule 1 - Annual Water Licence Report	<p><b>Comment</b> In addition to the conditions set out in Schedule 1 of the water licence, the following additional items would assist in the review of the annual report, with respect to water quality: map of Surveillance Network Program (SNP) stations, laboratory reports for SNP sampling, and statistical summary of SNP data.</p> <p><b>Recommendation</b> The following additional items should be added to Schedule 1 of the water licence: - map of SNP stations - laboratory reports for SNP sampling - statistical summary of SNP data</p>	<b>June 13:</b> No comment.	Schedule 1 of the Licence lists annual reporting requirements, including: tabular summaries of all data generated and associated laboratory reports, geographic coordinates for all SNP station sites, and a map showing station locations.
7	Water licence, Annex A (SNP), Part C: SNP Station Descriptions and Monitoring Requirements	<p><b>Comment</b> The proposed additional SNP monitoring stations (i.e., monitoring the quality of treated effluent in the wetland area, and monitoring ponded water within or adjacent to the SWDF for potential impacts) would assist in: (1) monitoring the quality of STP effluent before it flows into the Mackenzie River, (2) evaluating the effect of wetlands treatment on STP effluent quality, and (3) identifying potential impacts of the SWDF on groundwater and surface water.</p> <p><b>Recommendation</b> Additional SNP monitoring stations should be added to the water licence, as proposed in Annex A of the draft water licence (i.e., monitoring the quality of treated effluent in the wetland area, and monitoring ponded water within or adjacent to the SWDF for potential impacts). Locating the wetlands monitoring station toward the downstream end of the wetland area is optimal, in order to gauge the effectiveness of the wetland treatment and to monitor Sewage Treatment Plant (STP) effluent quality before it flows into the Mackenzie River. An assessment of the drainage pattern in and around the Solid Waste Disposal Facility (SWDF) should be conducted, to assist in siting the new SNP station most effectively.</p>	<b>June 13:</b> The community is prepared to comply if the MVLWB makes this a condition of the new water licence.	Three sampling stations have been added to the SNP: one station to monitor the quality of treated effluent in the wetland area and the effectiveness of wetland treatment; two stations to monitor ponded water within or adjacent to the domestic waste cell and construction waste cell at the SWDF for potential impacts. The exact location of these stations will be determined in consultation with the Inspector. Geographic coordinates of the stations and a map showing their locations are required as part of the Annual Report.

8	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Site Water Management	<p><b>Comment</b> Including site water management as a water licence condition would require the Licencee to anticipate, prevent and mitigate issues (including leachate and runoff) which have the potential to affect water quality.</p> <p><b>Recommendation</b> The water licence should require planning and implementation of site water management (including use of drainage controls and clean water diversion) for the sewage and solid waste facilities.</p>	June 13: No comment.	Condition D.18 requires the Licensee to take measures to minimize or eliminate standing water at the SWDF. SNP locations have been added for areas of standing water in the domestic waste cell and construction waste cell at the SWDF.
9	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Sludge Management	<p><b>Comment</b> Section 3.2.4 (Sludge Monitoring and Removal) states that "Sludge was last removed from Cell 1 in September, 2012... The current water licence states that quantities of sewage solids removed from the sewage treatment facility must be measured and recorded. The water licence does not require that sampling or depth measurements of the sludge blanket be completed. However, sampling and depth measurement procedures may become a future condition of the licence... Sludge should be removed every 5 years or more often if the efficiency of the lagoon needs improving, or if the results from the lagoon discharge points (specifically Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) analyses) become non-compliant. Prior to removing any sludge a study should be conducted by a qualified Professional Engineer to recommend how the removed sludge should be treated and disposed of. The quantity of any sludge removed from the facility must be measured and recorded."</p> <p><b>Recommendation</b> The water licence should include conditions for measuring sludge depth as recommended by a qualified professional engineer. Sludge should be removed, tested, and disposal options identified in accordance with sludge chemistry.</p>	June 13: This does not appear to be any different than the existing requirement.	<p>Condition D.9 requires the Licensee to submit written notification to the Board and an Inspector 60 days prior to sludge removal. The notification shall include: how the sludge shall be removed; where the sludge will be deposited; how the sludge shall be treated; and final disposal/ end use. Sludge removal shall not commence until authorized in writing by an Inspector.</p> <p>Condition E.3 requires a revised O&amp;M Plan for the Sewage Disposal Facilities to be submitted within one year of issuance. Schedule 2 requires information on sludge</p>

				management activities, to be included in the Plan. Sludge depth measurements are to be included in the Annual Report, as per Schedule 1, item 1.j.
10	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Outstanding items	<p><b>Comment</b> A number of standard items are missing from the O&amp;M Plan.</p> <p><b>Recommendation</b> The O&amp;M Plan should include the following additional elements: - map of SNP stations - description of how contaminated soil from municipal operations is managed - a section that discusses site water management, including use of drainage controls - a section that discusses progressive reclamation, and provides an update regarding which sections of the landfill have been progressively reclaimed - contingency plans to manage sludge, sewage effluent, backwash water, and SWDF leachate which does not meet water licence disposal criteria - discuss whether secondary containment is provided for hazardous wastes</p>	<p><b>June 13:</b> If the MWLWB determines that further modifications to the O&amp;M Plan last updated and approved in November 2015 should be included as a condition of the new WL, the Hamlet requests that a reasonable time frame of at least one year be set in coordination with planning for a new solid waste facility.</p>	<p>The O&amp;M Plan submitted by the Hamlet in December 2015 did not go to the Board for approval as the Licence renewal application was pending.</p> <p>Conditions E.2 and E.3 require revised O&amp;M Plans for the SWDF and Sewage Disposal Facilities to be submitted within one year of issuance. Schedule 2 contains the details of additional information to be included in Plans.</p>
11	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Landfill Expansion	<p><b>Comment</b> Section 4.1.1.5 of the O&amp;M Plan states that the current solid waste facility does not have enough space to accommodate the projected amount of waste that will be generated in the next 10 years. Preliminary planning for the future expansion of the solid waste facility has been completed.</p> <p><b>Recommendation</b> An expansion plan and an interim closure plan should be provided for the solid waste facility.</p>	<p><b>June 13:</b> The Hamlet is planning to expand the site and will provide all information including a closure plan for the current site as part of that project. The Hamlet requests the Board not require an interim closure plan as a condition of the new</p>	<p>Condition D.23 requires the submission of an Action Plan to address capacity issues at the Solid Waste Disposal Facilities within one year of issuance. A timeline for implementation of the Action Plan is required,</p>

			water licence.	including start and finish dates for construction of the new facility.
12	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Leachate	<p><b>Comment</b> Section 4.2.6 (Discharge of Leachate) states: When water is present at the bottom of the domestic and construction waste pits, the Hamlet employees have been taking samples and then pumping it out and discharging it onto adjacent land, to the satisfaction of the Inspector as required by the current Water Licence. For the domestic waste pit, the discharge is west of the site and for the construction waste pit it is to the north. Because the discharge of accumulated water from a solid waste site may contain harmful contaminants, a number of mitigation measures were recommended for future operations.</p> <p><b>Recommendation</b> Recommendations identified in Section 4.2.6 (Discharge of Leachate) should be implemented, as follows: . measures should be taken to minimize water infiltration to the solid waste cells/trenches; . prior to pumping and discharge onto adjacent lands, analysis results should be submitted and approved by the Inspector. Samples should be analyzed for: . Field parameters (pH, temperature and conductivity); . Total metals; . Hydrocarbons (Fi to F4 and BTEX); . Total ammonia, nitrate and nitrite (separately); . Total phosphorus; and . Major ions. In the event that the Inspector is not satisfied with the analysis results a qualified Professional Engineer should be engaged to determine appropriate treatment and/or disposal options.</p>	<b>June 13:</b> The community is prepared to comply if the MVLWB makes this a condition of the new water licence.	Condition D.18 requires the Licensee to take measures to minimize or eliminate standing water at the SWDF. SNP locations have been added for areas of standing water in the domestic waste cell and construction waste cell at the SWDF. Condition D.19 requires sampling results to be submitted and written authorization obtained prior to discharge.
13	Operation and Maintenance Plan - Sewage and Solid Waste Facilities: Appendix C (Guidelines for Wastewater Sampling)	<p><b>Comment</b> Appendix C (Guidelines for Wastewater Sampling) provides very generic information and no details on Quality Assurance/Quality Control (QA/QC.)</p> <p><b>Recommendation</b> Revise Appendix C (Guidelines for Wastewater Sampling) to provide information specific to the Surveillance Network Program (SNP), including: sampling locations, frequencies, and specific procedures. As well, QA/QC procedures should be described, including: sample blanks, travel/trip blanks, and replicate</p>	<b>June 13:</b> If the MWLWB determines that further modifications to the O&MP last updated and approved in November 2015 should be included as a condition of the new	The Licensee shall comply with Part B of the SNP which requires that all sampling, sample preservation, and analyses shall be conducted in accordance with methods prescribed in

		samples).	WL, the Hamlet requests that a reasonable time frame of at least one year be set in coordination with planning for a new solid waste facility.	the current edition of American Public Health Association's (APHA) Standard Methods for the Examination of Water and Wastewater at the time of analysis, or by other such methods approved by an Analyst.
Fisheries and Oceans Canada: Gary Cooper				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	Water License Renewal Application	<p><b>Comment</b> Provided the proponent implements the appropriate mitigation measures for its project, and follows the guidance available on DFO's website at (<a href="http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html">http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html</a>), the Program is of the view that the proposal should not result in serious harm to fish or contravene sections 32, 33 or 58 of the Species at Risk Act. No formal approval is required from the Program under the Fisheries Act or the Species at Risk Act in order to proceed with the proposal.</p> <p><b>Recommendation</b> In order to comply with the Act, it is recommended that the proponent follow our guidance tools which can be found at the following website (<a href="http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html">http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/index-eng.html</a>). Should the plans change or if the proponent omitted some information in the proposal such that the proposal meets the criteria for a site specific review, as described on our website (<a href="http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html">http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html</a>), they should complete and submit the request for review form that is also available on the website.</p>	<p><b>June 13:</b> The Hamlet application is for a municipal undertaking and is not proposing a project. If there are specific requirements The Hamlet requests the MVLWB advise.</p>	Noted.
GNWT - ENR: Central Email GNWT				

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
8	General File	<b>Comment</b> ( <a href="#">doc</a> ) ENR Comments <b>Recommendation</b>		
1	Term of Licence	<b>Comment</b> None <b>Recommendation</b> ENR supports the Hamlet's request for 10 year term renewal	<b>June 13:</b> No comment.	Noted.
2	EQCs	<b>Comment</b> The MVLWB has requested for input in the draft Water Licence on the proposed wastewater EQCs for SNP station 1412-2. MVLWB has proposed continuing apply the previous licence EQC's, which were derived from input by the DIAND Water Resource officer in 2006. ENR is not opposed to applying the same EQCs to the water licence renewal but notes that the EQC should be based the achievability of the treatment systems as well as the conditions of the receiving environment. <b>Recommendation</b> ENR recommends the MVLWB consider the appropriate EQCs for SNP station 1412-2 based on the sewage treatment facilities and their capabilities. ENR does note that Oil and Grease has recently been measured as 5 mg/L rather than reliance on visible sheen.		The Board has evaluated the existing EQCs using flow and water quality data from the Mackenzie River, and using procedures outlined in the <i>Alberta Water Quality Based Effluent Limits Procedures Manual</i> , have deemed the EQCs appropriate for this water licence. The EQC for Oil and Grease has been updated to 5 mg/L.
3	Operations and Maintenance Plan for the Sewage and Solid Waste Disposal Facilities	<b>Comment</b> The Spill Response Plan described in Section 6.3.4 of the Operations and Maintenance Plan (O&M Plan) makes references to another section of the document for containment procedures in the event of a spill near a waterbody. However, the Section referred to in the document, Section 7.3.2, does not exist in the Plan. The Plan should provide details on how to address and prevent spills in close proximity to a waterbody, including description on proper disposal of contaminated water.  <b>Recommendation</b> ENR recommends the Hamlet update the Spill Response plan to better address spills in close proximity to a waterbody. This should include detailed instructions on how to respond to a spill in a waterbody (e.g. spill booms) and disposal of contaminated water (i.e.	<b>June 13:</b> The community is prepared to comply if the MVLWB makes this a condition of the new water licence.	Condition H.2 requires submission of a revised Spill Contingency Plan within one year of issuance.

		using a vacuum truck removing hydrocarbon water and disposing at an approved facility).		
4	Operations and Maintenance Plan QA/QC	<p><b>Comment</b> In ENR's previous comments on the 2012 and 2013 Annual Water Licence Report, ENR requested the Hamlet to investigate QA/QC sampling methodology to ensure no errors are being introduced. This previous comment was result of reporting pH of 11 on July 19, 2012 at SNP 1412-2. The Hamlet has included a wastewater sampling protocol in the O&amp;M Plan in Appendix C (Guidelines for Wastewater Sampling). However, there is no discussion on QA/QC procedures included in the document. A QA/QC procedure would provide the Hamlet better assurance on the quality of their samples and reduces the probability of false results.</p> <p><b>Recommendation</b> ENR recommends the Hamlet update the O&amp;M Plan to include QA/QC procedures for water quality sampling. It is noted that the Hamlet typically only collects one (1) water sample annually (during decant).</p>	<p><b>June 13:</b> If the MWLWB determines that further modifications to the O&amp;MP last updated and approved in November 2015 should be included as a condition of the new WL, the Hamlet requests that a reasonable time frame of at least one year be set for completion, and that any specific requirements such as the recommended QA/QC plan be consistent with the new O&amp;M Plan templates.</p>	<p>The Licensee shall comply with Part B of the SNP which requires that all sampling, sample preservation, and analyses shall be conducted in accordance with methods prescribed in the current edition of American Public Health Association's (APHA) Standard Methods for the Examination of Water and Wastewater at the time of analysis, or by other such methods approved by an Analyst.</p> <p>SNP station 1412-2 requires weekly sampling during discharge. The Hamlet has indicated that discharge typically takes 20-25 days (see section 4.10 of the municipal questionnaire that was included as part of the Licence application). It follows that more than one sample should be collected during decant.</p>

5	Draft Water Licence Part D - Item 15 (Conditions Applying to Waste Disposal - Solid Waste)	<p><b>Comment</b> In Part D, Item 15 of the draft licence the Board requested input from reviewers on the two proposed conditions regarding whether or not sewage and solid waste from industrial, commercial and institutional operators working outside of local government boundaries should be accepted. ENR SSR has concerns about the licence allowing acceptance of these types of outside waste streams as the landfill and sewage facilities do not have the capacity to support these excess volumes. Furthermore, the Hamlet currently does not have the human resource capacity to manage and control acceptance of approved wastes, let alone excess external wastes (i.e. no permanent Landfill Attendant, gate controlled with sign-out key that works on honour system). As noted in previous inspection reports, the Hamlet has a difficult time controlling and managing waste disposal in the Construction Waste area where there are no signed waste stream segregation areas for the public to sort wastes, which promotes dumping of mixed and unknown wastes streams in this area. In addition, there are no controls in place to prevent hazardous wastes related to demolitions (i.e. asbestos, mercury, and lead) from entering this area either.</p> <p><b>Recommendation</b> 1. ENR recommends that sewage and solid waste from industrial, commercial and institutional operations outside of local government boundaries should not be accepted due to both facility and operational capacity issues in the Hamlet. 2. ENR supports the condition proposed by the MVLWB in the draft Water Licence of Part D - Item 15 stating the following: "Sewage and solid waste from industrial, commercial and institutional operators working outside of local government boundaries of Fort Providence shall not be accepted at the Waste Disposal Facilities, unless otherwise authorized in writing by an Inspector"</p>	June 13: Agree.	Condition D.3 requires Inspector approval for the acceptance of sewage or solid waste from industrial, commercial and institutional operators working outside of the local government boundaries.
---	--	---	-----------------	---

6	<p>Control of Commercial/Industrial Hazardous Waste from Entering the Landfill and Waste Segregation at the Construction and Hazardous Waste Areas.</p>	<p><b>Comment</b> Part D, Items 10 &amp; 16 of the draft licence refers to Hazardous Waste and Waste Segregation. ENR would like to know how the Hamlet intends to control/prevent commercial, industrial and institutional hazardous wastes from entering the solid waste disposal facility? The Landfill is often unattended and Users are able to sign out a gate key from the Hamlet office and abide only by the honour system in terms of what they dump. As previous inspection visits to the Construction Waste Area at the Landfill have shown, Users have disposed of mixed waste streams in this area (including domestic and food waste) likely because there is no on site guidance or signage for waste stream segregation. ENR has noted entire trailers (demolition waste) full of various wastes (including hazardous wastes) being disposed of in this area. ENR also notes that this area contains a small ephemeral wetland/ponded area that may be impacted by various wastes disposed of in this area. The Construction Waste area requires better controlled access and waste stream management with clearly defined waste segregation areas. The Household/Municipal Hazardous Waste Area at the facility requires better signage and segregation as well.</p> <p><b>Recommendation</b> 1. ENR recommends that a clear strategic/operational plan for preventing commercial, industrial and institutional hazardous wastes from entering the facility should be outlined in the Solid Waste Disposal Facility O&amp;M Plan (Part E, Item 2). 2. ENR recommends better controlled access and waste stream management with clearly defined waste segregation areas at the Construction and Household/Municipal Hazardous Waste Areas. This should include waste type signage and associated waste segregation areas.</p>	<p><b>June 13:</b> 1. see previous comments about further modifications to the November 2015 O&amp;M Plan Update. 2. The Hamlet recently installed new signs and will be considering how to better control access.</p>	<p>Conditions have been included in Part D to address segregation of Wastes and the development and installation of signage.</p> <p>Condition E.2 requires a revised O&amp;M Plan for the SWDF to be submitted within one year of issuance. Schedule 2 contains the details of additional information to be included in Plans.</p>
---	---	--	--	--

7	Signs and GPS Coordinates for SNP Stations (Part B, Item 11).	<p><b>Comment</b> Part B, Item 11 of the draft licence notes that all facilities should be signed. Inspector agrees with this condition and further suggests that it be added to the annexed SNP in Part B, Item 2. GPS coordinates of designated SNP sample stations should be included in the Annual reports. This is helpful information for Inspectors and/or Hamlet staff who are not familiar with new and existing SNP stations.</p> <p><b>Recommendation</b> 1. ENR recommends that the requirement to post signage that identifies SNP sample stations be included in Part B, Item 2 of the annexed SNP. 2. ENR recommends that once SNP station locations are designated that GPS coordinates of all SNP stations sites be collected by the Hamlet and included in annual reports.</p>	<b>June 13:</b> No comment.	The requirement to post signs at SNP stations has been added to Part B, item 2 of the annexed SNP. Geographic coordinates for SNP station sites has been included in the list of items required for Annual Reports in Schedule 1.
---	---	--	-----------------------------	---

#### MVLWB: Heather Scott

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Response
1	Water Treatment Plant (WTP) Waste Sludge	<p><b>Comment</b> Does the water treatment plant produce sludge?</p> <p><b>Recommendation</b> Please indicate if the WTP produces sludge.</p>	<b>June 13:</b> Yes the WTP produces sludge.	Condition E.4 requires submission of a Water Treatment Plant O&M Plan within one year of issuance.
2	None	<p><b>Comment</b> How much is produced per month (m3/month)?</p> <p><b>Recommendation</b> Please indicate the volume of sludge produced per month.</p>	<b>June 13:</b> The Hamlet has not been tracking the amounts.	Please see response to comment #3 above.
3	None	<p><b>Comment</b> What is the composition?</p> <p><b>Recommendation</b> Please indicate the composition of the sludge.</p>	<b>June 13:</b> There is no sludge composition data available.	Please see response to comment #3 above.
4	None	<p><b>Comment</b> How is it disposed of?</p> <p><b>Recommendation</b> Please indicate how the sludge is disposed of.</p>	<b>June 13:</b> Through backwash	Please see response to comment #3 above.
5	Water Treatment Plant (WTP) Wastewater	<p><b>Comment</b> Does the water treatment plant produce wastewater from backwashing, regeneration, filtration reject water streams, etc.?</p> <p><b>Recommendation</b> Please indicate if the WTP produces wastewater.</p>	<b>June 13:</b> Yes.	Please see response to comment #3 above.
6	None	<b>Comment</b> How much wastewater is produced per month?	<b>June 13:</b> 384	Please see response

		<b>Recommendation</b> Please indicate the volume of wastewater produced per month.	m3/month	to comment #3 above.
7	None	<b>Comment</b> What type/composition of wastewater is produced? <b>Recommendation</b> Please indicate the type/composition of wastewater that is produced.	<b>June 13:</b> backwash and waste water	Please see response to comment #3 above.
8	None	<b>Comment</b> How is the wastewater disposed of? <b>Recommendation</b> Please indicate how the wastewater is disposed of.	<b>June 13:</b> pumped out towards the river bank and flows into river	Please see response to comment #3 above.
9	Other Waste Streams from the Water Treatment Plant (WTP)	<b>Comment</b> Are there other waste streams produced at the water treatment plant? For example, unused/expired treatment chemicals and test reagents, waste filter media. <b>Recommendation</b> Please indicate how each waste stream is disposed of.	<b>June 13:</b> expired reagent, and expired calibration standards	Please see response to comment #3 above.
10	Draft Water Licence, Surveillance Network Program, Part C: SNP Station Descriptions and Monitoring Requirements.	<b>Comment</b> Board Staff have added several parameters to existing sampling requirements under the current water licence. These sampling parameters are synonymous with other municipal water licences recently issued by the MVLWB, such as MV2015L3-0001, MV2014L3-0008, MV2014L3-0007. <b>Recommendation</b> Recommend the addition of sampling parameters as outlined in the draft Water Licence, SNP, Part C.	<b>June 13:</b> Agree.	The SNP has been updated to reflect these changes.
11	Spill Contingency Plan	<b>Comment</b> The Hamlet has included a Spill Contingency Plan as Section 6.3 of the Operation and Maintenance Plan, Sewage and Solid Waste Facilities. This contains some useful information; however, it should be updated to include all pertinent information as per the Spill Contingency Guidelines, Aboriginal Affairs and Northern Development Canada (AANDC, NT Region), 2007 ( <a href="http://www.aadnc-aandc.gc.ca/eng/1100100024236">http://www.aadnc-aandc.gc.ca/eng/1100100024236</a> ), using the newly developed template for Municipal Spill Contingency Plans ( <a href="https://mvlwb.com/sites/default/files/documents/Forms/Operation%20and%20Maintenance%20Plan%20Templates%20-%20Spill%20Contingency%20Plan%20-%20Nov%2010_15%20FINAL.pdf">https://mvlwb.com/sites/default/files/documents/Forms/Operation%20and%20Maintenance%20Plan%20Templates%20-%20Spill%20Contingency%20Plan%20-%20Nov%2010_15%20FINAL.pdf</a> ).	<b>June 13:</b> The community is prepared to comply if the MVLWB makes this a condition of the new water licence, however asks that a reasonable length of time of one year be allowed for this change to be made in coordination with other comments about updates to the O&M Plan last revised in	Condition H.2 requires submission of a revised Spill Contingency Plan within one year of issuance.

		<b>Recommendation</b> Recommend that as a condition of the new water licence, the Hamlet complete a Spill Contingency Plan using the template provided by the MVLWB.	November 2015.	
<b>MVLWB: Miki Ehrlich</b>				
<b>ID</b>	<b>Topic</b>	<b>Reviewer Comment/Recommendation</b>	<b>Proponent Response</b>	<b>Board Response</b>
1	Renewal Application, Figure 3: Domestic Solid Waste Site	<p><b>Comment</b> Figure 3 is missing several features of the Solid Waste Disposal Facilities(SWDF), including an outline of the boundary of the site. An accurate map is required for the Water Licencing process.</p> <p><b>Recommendation</b> A more comprehensive map of the SWDF is needed. The map should include the following additional features: location of the construction waste disposal site, location of gates, fencing, the hazardous waste area, and boundaries of individual landfill cells with labels for each cell. The map should include the entire footprint of the SWDF and clearly demarcate the boundary.</p>	<p><b>June 13:</b> A revised Figure will be provided to show surveyed Lot 341 Plan 4370 which has a total site area of approximately 24 hectares, and the areas within this site used for solid waste disposal. It is not possible to provide boundaries of individual landfill cells at this time as the Hamlet has been using the mounding method since 2012. The Hamlet requests they be given time to have a new map created which can be done in conjunction with the next Annual Report.</p>	An adequate figure has been received.
2	Construction waste disposal site	<p><b>Comment</b> It is unclear whether the construction waste disposal site is gated or fenced.</p> <p><b>Recommendation</b> Please provide additional details on how the construction waste disposal site is currently managed to ensure that only appropriate wastes are deposited, including whether signage, and a fence and/or gate is present at the site.</p>	<p><b>June 13:</b> There is currently no fencing around the area known as the construction waste disposal site. A gate across the access road is used to control access. The community is considering how to</p>	Condition D.15 requires the Licensee to maintain fencing at the Solid Waste Disposal Facilities to the satisfaction of an Inspector.

			address the issue as requested by the Inspector, and will provide information in their next Annual Report.	
3	Status of landfill cell #1	<p><b>Comment</b> In the Municipal Water Use Inspection Report dated September 3, 2015, the Inspector noted that during her June 9, 2015 inspection that the older domestic waste cell (#1) at the west end of the facility perimeter was over capacity and should be compacted, covered, capped and closed as per the Hamlet's O&amp;M plan as soon as possible. She also reported that the SAO told her that the cell would be covered and capped during the summer season.</p> <p><b>Recommendation</b> Please clarify the status landfill cell #1. As per Part G, item 1 of the current Water Licence MV2006L3-0002, an Abandonment and Restoration Plan is required at least 6 months prior to abandoning any sewage or solid waste facilities. Please provide details on how the Hamlet will meet this requirement, including a timeline.</p>	<p><b>June 13:</b> The Hamlet has not abandoned the current sewage or solid waste facilities. An Abandonment and Restoration Plan will be prepared in accordance with conditions of the new Water Licence.</p>	Condition I.2 requires submission of a Closure and Reclamation Plan at least 6 months prior to the closure of any component or cell of the Sewage or Solid Waste Disposal Facilities.
4	Use of individual cells for domestic waste	<p><b>Comment</b> The O&amp;M Plan does not discuss the various solid waste cells at the SWDF.</p> <p><b>Recommendation</b> Further information is needed on the status of each solid waste cell, and how they are operated and maintained (i.e. the capacity/lifespan remaining for each cell, whether more than one cell is in use at a time, how the cell is left if it is not to be used for an extended period).</p>	<p><b>June 13:</b> The operation of the SWF is described in the O&amp;M Plan last updated in November 2015. The Hamlet has been using the area (or mounding) method since 2012. If detailed information about the current status of waste cells is required the Hamlet suggests this be added to the required content of Annual Reports.</p>	Condition E.2 requires a revised O&M Plan for the SWDF to be submitted within one year of issuance. Schedule 2 contains the details of additional information to be included in Plans.
5	O&M Plan: Section	<b>Comment</b> Section 4.2.6 states that when water is present	<b>June 13:</b> The Hamlet is	Condition D.18

	4.2.6 - Discharge of Leachate	<p>at the bottom of the domestic and construction waste pits, Hamlet employees have been taking samples and then pumping it out and discharging it onto adjacent land, to the satisfaction of the Inspector.</p> <p><b>Recommendation</b> Please provide sampling results, including date samples were taken, for the most recent sampling event (please also provide any additional sampling results that are available). Please provide an estimate of the volume of water that is present at the two sites (domestic waste pit and construction waste pit) and any additional details such as: whether there is any seasonality to the presence of this water, the frequency with which the leachate has required removal, and a map showing the location of these two leachate sites.</p>	unable to provide recent sampling results, but suggests that if ongoing information is needed that it be added to the required content of Annual Reports. There are no formal leachate sites at the existing SWDF.	requires the Licensee to take measures to minimize or eliminate standing water at the SWDF. SNP locations have been added for areas of standing water in the domestic waste cell and construction waste cell at the SWDF. Condition D.19 requires sampling results to be submitted and written authorization obtained prior to discharge. The volume of water must be reported in the Annual Report.
6	Application, Section 5.19 - Future expansion at Solid Waste Disposal Facilities; O&M Plan, Section 4.1.1.5 - Waste generation and site capacity	<p><b>Comment</b> In the Application, the Hamlet indicates that a future expansion to the SWDF is required and refers to the Solid Waste Site Preliminary Evaluation (2012, Dillon). This evaluation recommends the commencement of planning for an expansion or relocation due to the remaining capacity at the current site (3-5 years). The O&amp;M Plan, section 4.1.1.5 indicates that the current SWDF does not have the capacity to accommodate the amount of waste projected over the next 10 years.</p> <p><b>Recommendation</b> Please provide an update on the Hamlet's timelines for an expansion/relocation. Please clarify what the current estimate is for the remaining capacity and lifespan for the existing SWDF. If the estimate has changed since the 2012 evaluation provide an explanation for this change.</p>	<b>June 13:</b> The estimate provided in the 2012 evaluation remains unchanged.	Condition D.22 requires the submission of an Action Plan to address capacity issues at the Solid Waste Disposal Facilities within one year of issuance. A timeline for implementation of the Action Plan is required, including start and finish dates for construction of the new facility.
7	O&M Plan: Section	<b>Comment</b> This section lists the household hazardous	<b>June 13:</b> The Hamlet	Condition D.16

	4.1.1.3 - Hazardous Waste Disposal Area - Current practice for hydrocarbon contaminated soil	wastes that are accepted at the SWDF. There is no mention of hydrocarbon contaminated soil in this list. <b>Recommendation</b> Please clarify what current practice is for hydrocarbon contaminated soil from residential fuel spills. If this material is accepted, please describe where it is stored and how it is managed and disposed of. If it is not accepted, what direction are residents given for appropriate disposal?	has not accepted any hydrocarbon contaminated soil from residential fuel spills in the past 5 years. Additional information can be provided in an updated O&M Plan - see also other responses about O&M Plan update.	prohibits the acceptance of contaminated soil from industrial, commercial, residential and institutional operators, unless written authorization has been given by an Inspector.
8	O&M Plan: Section 4.1.1.3 - Hazardous Waste Disposal Area - Location of remediated soil pile	<b>Comment</b> Section 4.1.1.3 states that a pile of remediated contaminated soil is located north of the construction waste pit and that the pile is labelled in Figure 1 in Appendix B. However, Figure 1 does not seem to include a label for remediated contaminated soil. <b>Recommendation</b> Please clarify where the remediated soil pile is located. Include an updated map, if appropriate.	<b>June 13:</b> The remediated soil is located adjacent to the construction waste pit and the location is shown on revised Figure 3.	Figure received. Condition E.2 requires a revised O&M Plan for the SWDF to be submitted within one year of issuance. Schedule 2 requires the updated Plan to include a map showing all the components of the SWDF, including the remediated soil pile.
9	O&M Plan: Section 4.2.1 - Basic operations	<b>Comment</b> Information is given on best practices for the area method of solid waste disposal. No details are provided on the Hamlet's current practice for compaction and cover of solid waste. <b>Recommendation</b> Please provide more information on the Hamlet's current practices for compaction and cover of solid waste including frequency of compaction and cover, and source of cover material.	<b>June 13:</b> Current information about practices for compaction and cover have been provided in Annual Reports. Inspection reports also provide current information.	Condition E.2 requires a revised O&M Plan for the SWDF to be submitted within one year of issuance. Schedule 2 requires the updated Plan to include details on the Hamlet's current practices for compaction and cover of solid waste including frequency of compaction and cover,

				and source of cover material.
10	Hydrology of the sewage lagoon and wetland system	<p><b>Comment</b> Little detail is provided in the map and application materials on the hydrology of the sewage lagoon system.</p> <p><b>Recommendation</b> Please provide details on the flowpath of sewage following decant from the last lagoon cell. Information can include, but not be limited to: figures of the flowpath, flow direction, ponded water in the flowpath and the ultimate receiving water body.</p>	<p><b>June 13:</b> The sewage lagoon drains through an adjacent wetland and flows into the MacKenzie River - a revised figure showing the the discharge location will be provided . There have been no changes to this flowpath for over 15 years.</p>	<p>The proponent has provided a figure showing flowpath and discharge location. An SNP location has been added to the Licence. The location will be chosen along this discharge flow path by the proponent and the Inspector.</p>
11	Renewal Application, List of studies undertaken	<p><b>Comment</b> The Water Intake Options Assessment (2015) listed has not been received by the MVLWB</p> <p><b>Recommendation</b> Please provide a copy of the Water Intake Options Assessment.</p>	<p><b>June 13:</b> A copy of the report has been provided to the MVLWB.</p>	<p>Noted.</p>
12	Map of the Water Supply Facilities	<p><b>Comment</b> The application does not include a map that provides adequate detail on the Water Supply Facilities. The Water Supply Facilities comprises the area and associated infrastructure designed to collect, treat, and supply Water for municipal purposes. Figure 1 shows the location of the Water Treatment plant but does not show the location of the water intake. An accurate map is required for the Water Licencing process.</p> <p><b>Recommendation</b> A more comprehensive and detailed map of the Water Supply Facilities is needed. The map should show the area and associated infrastructure for the water supply facilities, including the raw water intake location. The map should be at an adequate scale to show the location of any wastewater discharge.</p>	<p><b>June 13:</b> A revised figure will be provided to show the location of the raw water intake and wetwell . The locations of all facilities are shown in the Water Intake Options Assessment Report. There has been no change to the location of these facilities for over past 15 years.</p>	<p>Figure received. Condition E.4 requires submission of an O&amp;M Plan for the Water Treatment Plant within one year of issuance. Schedule 2 requires the Plan to include a map that shows the area and associated infrastructure for the water supply facilities, including the raw water intake location. The map should be at an adequate scale to show the location of any wastewater discharge.</p>

13	Contaminated soil at the landfill	<p><b>Comment</b> In discussions with the Inspector, questions arose regarding the status of contaminated soil from a spill that occurred in 2008 at a commercial site in the Hamlet.</p> <p><b>Recommendation</b> Please clarify whether hydrocarbon contaminated soil from this spill was received at the landfill. Where is this contaminated soil stored? Has additional contaminated soil been received at this site since the 2008 spill? How is this site being managed? Has any testing of the soil been conducted? If so, please provide test results. What are the Hamlet's plans for this soil and the site, including the timeline?</p>	<p><b>June 13:</b> A revised figure will be provided showing the location of the remediated soil. No additional contaminated soil has been received at this site since the 2008 spill. See also response to comment 8 above. The Hamlet would include information about any new contaminated soil received in its Annual Reports.</p>	<p>Condition E.2 requires a revised O&amp;M Plan for the SWDF to be submitted within one year of issuance. Schedule 2 requires details on how the remediated soil pile is being managed, results from any soil testing that has been conducted, and information on the Hamlet's plans for the soil pile and the site, including a timeline.</p>
----	-----------------------------------	---	---	---

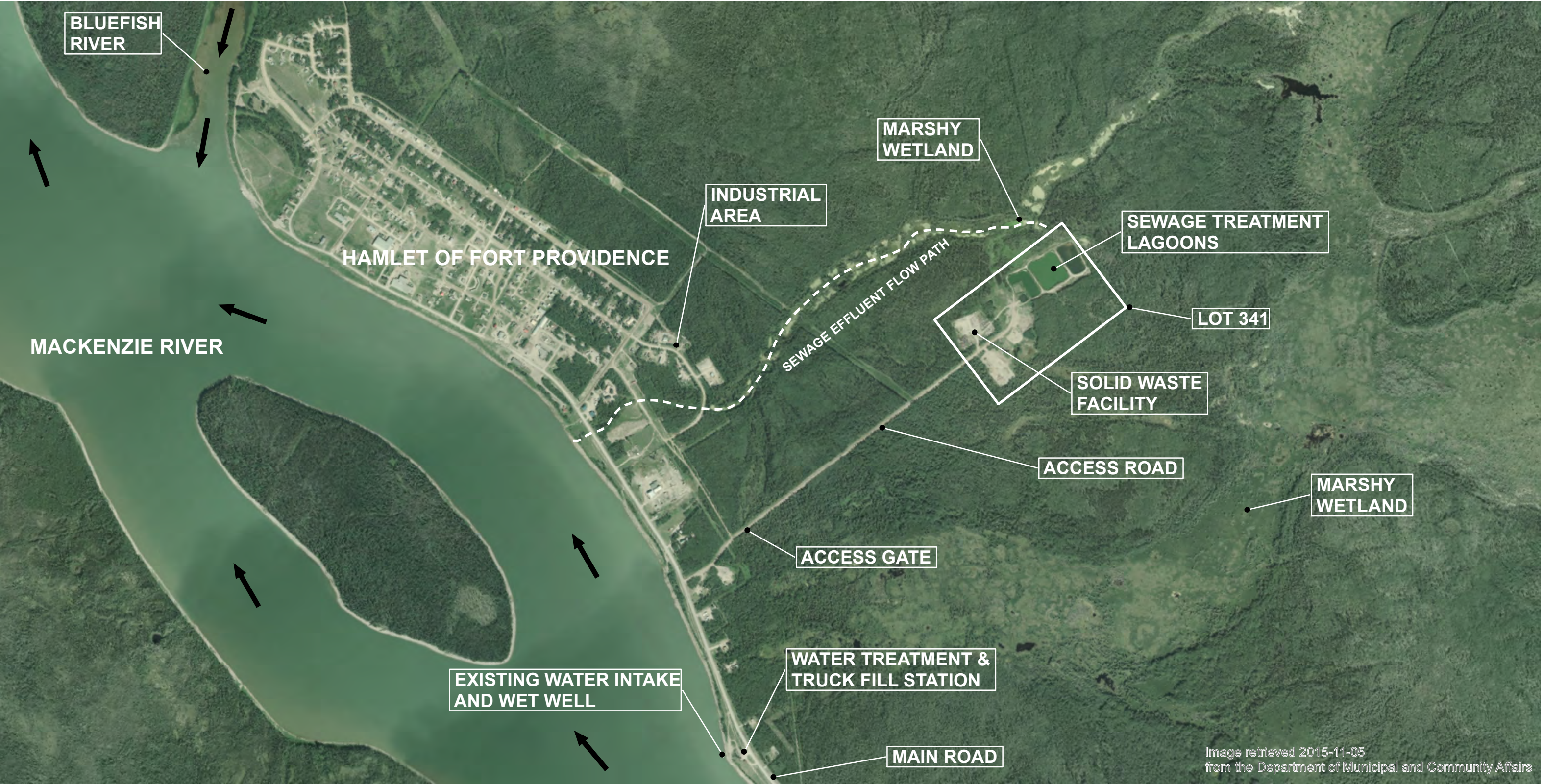


Image retrieved 2015-11-05  
from the Department of Municipal and Community Affairs

**FORT PROVIDENCE**

**Water and Waste Facility Locations**  
FIGURE 1



← FLOW DIRECTION



MAP DRAWING INFORMATION:  
DATA PROVIDED BY GNWT

MAP CREATED BY: PMH  
MAP CHECKED BY: ALP  
MAP PROJECTION: NAD 1983 UTM Zone 11N

SCALE 1:14,000

0 125 250 500 Meters



FILE LOCATION: \\DILLON.CA\\DILLON\_DFS\\YELLOWKNIFE\\YELLOWKNIFE CAD\\GIS\\152261 FORT PROVIDENCE WL RENEWAL\\MXD

PROJECT: 152261 STATUS: DRAFT DATE: 2016-05-31



## FORT PROVIDENCE

### Sewage Treatment Lagoon System

FIGURE 2



MAP DRAWING INFORMATION:  
DATA PROVIDED BY GNWT

MAP CREATED BY: PMH  
MAP CHECKED BY: ALP  
MAP PROJECTION: NAD 1983 UTM Zone 11N

SCALE 1:1500

0 12.5 25 50 Meters

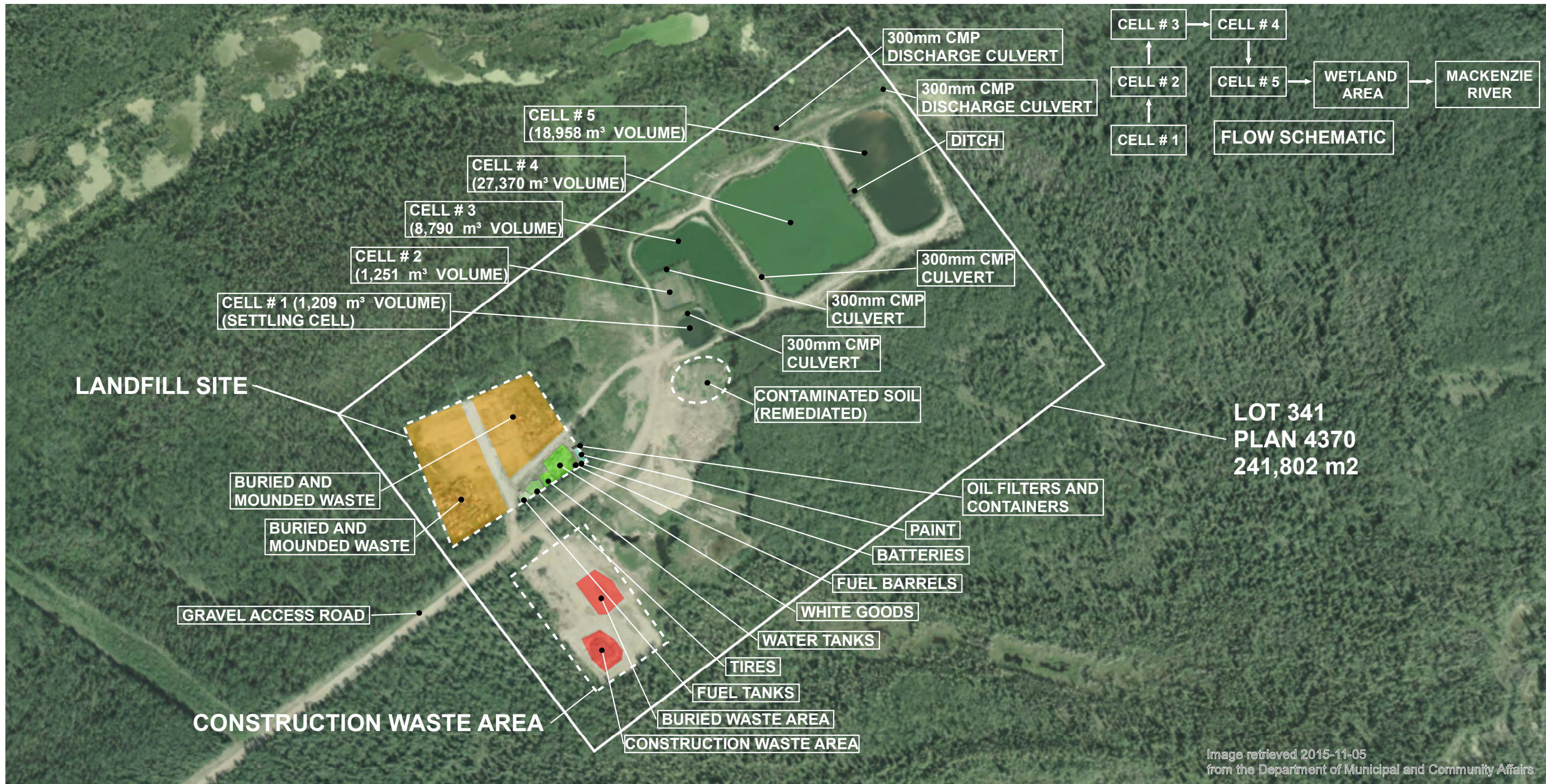


FILE LOCATION: \\DILLON.CA\\DILLON\_DFS\\YELLOWKNIFE\\YELLOWKNIFE CAD\\GIS\\152261 FORT PROVIDENCE WL RENEWAL\\MXD

PROJECT: 152261

STATUS: DRAFT

DATE: 2015-11-05



**FORT PROVIDENCE**

**Domestic Solid Waste and  
Sewage Treatment Lagoon Site**  
FIGURE 3



MAP DRAWING INFORMATION:  
DATA PROVIDED BY GNWT

MAP CREATED BY: PMH  
MAP CHECKED BY: ALP  
MAP PROJECTION: NAD 1983 UTM Zone 11N

SCALE 1:3500

0 25 50 100 Meters



FILE LOCATION: \\DILLON.CA\\DILLON\_DFS\\YELLOWKNIFE\\YELLOWKNIFE CAD\\GIS\\  
152261 FORT PROVIDENCE WL RENEWAL\\MXD

PROJECT: 152261 STATUS: DRAFT DATE: 2016-05-31



May 30, 2016

Miki Ehrlich  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7th Floor – 4910 50th Avenue  
P.O. Box 2130  
Yellowknife, NT  
X1A 2P6

Dear Ms. Ehrlich,

Re: Hamlet of Fort Providence  
Municipal Water Licence Renewal Application – MV2016L3-0001  
Request for Comment

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories, has reviewed the application at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Waters Act*, the *Forest Protection Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

**Topic 1: Term of Licence**

**Comment(s):**

None

**Recommendation:**

ENR supports the Hamlet's request for 10 year term renewal.

**Topic 2: EQCs**

The MVLWB has requested for input in the draft Water Licence on the proposed wastewater EQCs for SNP station 1412-2. MVLWB has proposed continuing apply the previous licence EQC's, which were derived from input by the DIAND Water Resource officer in 2006.

ENR is not opposed to applying the same EQCs to the water licence renewal but notes that the EQC should be based the achievability of the treatment systems as well as the conditions of the receiving environment.

**Recommendation:**

ENR recommends the MVLWB consider the appropriate EQCs for SNP station 1412-2 based on the sewage treatment facilities and their capabilities. ENR does note that Oil and Grease has recently been measured as 5 mg/L rather than reliance on visible sheen.

**Topic 3: Operations and Maintenance Plan for the Sewage and Solid Waste Disposal Facilities**

**Comment:**

The Spill Response Plan described in Section 6.3.4 of the Operations and Maintenance Plan (O&M Plan) makes references to another section of the document for containment procedures in the event of a spill near a waterbody. However, the Section referred to in the document, Section 7.3.2, does not exist in the Plan. The Plan should provide details on how to address and prevent spills in close proximity to a waterbody, including description on proper disposal of contaminated water.

**Recommendation:**

ENR recommends the Hamlet update the Spill Response plan to better address spills in close proximity to a waterbody. This should include detailed instructions on how to respond to a spill in a waterbody (e.g. spill booms) and disposal of contaminated water (i.e. using a vacuum truck removing hydrocarbon water and disposing at an approved facility).

**Topic 4: Operations and Maintenance Plan QA/QC**

**Comment:**

In ENR's previous comments on the 2012 and 2013 Annual Water Licence Report, ENR requested the Hamlet to investigate QA/QC sampling methodology to ensure no errors are being introduced. This previous comment was result of reporting pH of 11 on July 19, 2012 at SNP 1412-2.

The Hamlet has included a wastewater sampling protocol in the O&M Plan in Appendix C (Guidelines for Wastewater Sampling). However, there is no discussion on QA/QC procedures included in the document. A QA/QC procedure would provide the Hamlet better assurance on the quality of their samples and reduces the probability of false results.

**Recommendation:**

ENR recommends the Hamlet update the O&M Plan to include QA/QC procedures for water quality sampling. It is noted that the Hamlet typically only collects one (1) water sample annually (during decant).

**Topic 5: Draft Water Licence Part D – Item 15 (Conditions Applying to Waste Disposal - Solid Waste)****Comment:**

In Part D, Item 15 of the draft licence the Board requested input from reviewers on the two proposed conditions regarding whether or not sewage and solid waste from industrial, commercial and institutional operators working outside of local government boundaries should be accepted. ENR SSR has concerns about the licence allowing acceptance of these types of outside waste streams as the landfill and sewage facilities do not have the capacity to support these excess volumes. Furthermore, the Hamlet currently does not have the human resource capacity to manage and control acceptance of approved wastes, let alone excess external wastes (i.e. no permanent Landfill Attendant, gate controlled with sign-out key that works on honour system). As noted in previous inspection reports, the Hamlet has a difficult time controlling and managing waste disposal in the Construction Waste area where there are no signed waste stream segregation areas for the public to sort wastes, which promotes dumping of mixed and unknown wastes streams in this area. In addition, there are no controls in place to prevent hazardous wastes related to demolitions (i.e. asbestos, mercury, and lead) from entering this area either.

**Recommendations:**

1. ENR recommends that sewage and solid waste from industrial, commercial and institutional operations outside of local government boundaries should not be accepted due to both facility and operational capacity issues in the Hamlet.
2. ENR supports the condition proposed by the MVLWB in the draft Water Licence of Part D – Item 15 stating the following:

“Sewage and solid waste from industrial, commercial and institutional operators working outside of local government boundaries of Fort Providence shall not be accepted at the Waste Disposal Facilities, unless otherwise authorized in writing by an Inspector.”

## **Topic 6: Control of Commercial/Industrial Hazardous Waste from Entering the Landfill and Waste Segregation at the Construction and Hazardous Waste Areas.**

### **Comment:**

Part D, Items 10 & 16 of the draft licence refers to Hazardous Waste and Waste Segregation. ENR would like to know how the Hamlet intends to control/prevent commercial, industrial and institutional hazardous wastes from entering the solid waste disposal facility? The Landfill is often unattended and Users are able to sign out a gate key from the Hamlet office and abide only by the honour system in terms of what they dump. As previous inspection visits to the Construction Waste Area at the Landfill have shown, Users have disposed of mixed waste streams in this area (including domestic and food waste) likely because there is no on site guidance or signage for waste stream segregation. ENR has noted entire trailers (demolition waste) full of various wastes (including hazardous wastes) being disposed of in this area. ENR also notes that this area contains a small ephemeral wetland/ponded area that may be impacted by various wastes disposed of in this area. The Construction Waste area requires better controlled access and waste stream management with clearly defined waste segregation areas. The Household/Municipal Hazardous Waste Area at the facility requires better signage and segregation as well.

### **Recommendations:**

1. ENR recommends that a clear strategic/operational plan for preventing commercial, industrial and institutional hazardous wastes from entering the facility should be outlined in the Solid Waste Disposal Facility O&M Plan (Part E, Item 2).
2. ENR recommends better controlled access and waste stream management with clearly defined waste segregation areas at the Construction and Household/Municipal Hazardous Waste Areas. This should include waste type signage and associated waste segregation areas.

## **Topic 7: Signs and GPS Coordinates for SNP Stations (Part B, Item 11).**

### **Comment:**

Part B, Item 11 of the draft licence notes that all facilities should be signed. Inspector agrees with this condition and further suggests that it be added to the annexed SNP in Part B, Item 2. GPS coordinates of designated SNP sample stations should be included in the Annual reports. This is helpful information for Inspectors and/or Hamlet staff who are not familiar with new and existing SNP stations.

**Recommendations:**

1. ENR recommends that the requirement to post signage that identifies SNP sample stations be included in Part B, Item 2 of the annexed SNP.
2. ENR recommends that once SNP station locations are designated that GPS coordinates of all SNP stations sites be collected by the Hamlet and included in annual reports.

Comments and recommendations were provided by ENR technical experts in the Water Resources Division and the South Slave Region and were coordinated and collated by the Environmental Impact Assessment Section, Conservation, Assessment and Monitoring Division (CAM).

Should you have any questions or concerns, please do not hesitate to contact Marcy MacDougall at (867) 767-9233 Ext: 53099 or email [Marcy\\_MacDougall@gov.nt.ca](mailto:Marcy_MacDougall@gov.nt.ca).

Sincerely,



For: Patrick Clancy  
Environmental Regulatory Analyst  
Environmental Assessment and Monitoring  
Land and Water Division  
Department of Environment and Natural Resources  
Government of the Northwest Territories



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

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

May 30, 2016

EC File: 5200 000 025/002  
WLWB File: MV2016L3-0001

Heather Scott  
Technical Advisor  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4922 48<sup>th</sup> St.  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

Submitted via online review system

**RE: MV2016L3-0001 – Hamlet of Fort Providence – Municipal Water Licence  
Renewal Application**

Attention: Heather Scott

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Mackenzie Valley Land and Water Board (MVLWB) regarding the above-mentioned Water Licence Renewal and is submitting comments to the MVLWB via the online review system. ECCC's specialist advice is provided based on our mandate pursuant to the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Should you require further information, please do not hesitate to contact me at (867) 669-4707 or [Bradley.Summerfield@Canada.ca](mailto:Bradley.Summerfield@Canada.ca)

Sincerely,

Bradley Summerfield  
Environmental Assessment Coordinator, Environmental Assessment North (NT and NU),  
EPOD-PNR

Canada

[www.ec.gc.ca](http://www.ec.gc.ca)

Attachment: ECCC Comments on Hamlet of Fort Providence Municipal Water Licence  
Renewal Application

cc: Wade Romanko, Head, Environmental Assessment North (NT and NU), PNR-  
EPOD