



**Mackenzie Valley Land and Water Board**  
**7th Floor - 4922 48th Street**  
**P.O. Box 2130**  
**YELLOWKNIFE NT X1A 2P6**  
**Phone (867) 669-0506**  
**FAX (867) 873-6610**

**Staff Report**

<b>Applicant:</b> Hamlet of Fort Providence	
<b>Location:</b> Fort Providence, NT	<b>Application:</b> MV2016L3-0001
<b>Date Prepared:</b> May 3, 2018	<b>Meeting Date:</b> May 10, 2018
<b>Subject:</b> 2016/17 Annual Water Licence Report	

**1. Purpose/Report Summary**

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB/the Board) the 2016-2017 Annual Water Licence Report (Annual Report) submitted by the Hamlet of Fort Providence to fulfill Part B, condition 4 of municipal Water Licence MV2016L3-0001 (Licence).

**2. Background**

- July 7, 2016 – Issuance of Licence MV2016L3-0001;
- June 30, 2017 – Annual Report due;
- December 20, 2017 – Annual Report received;
- December 21, 2017 – Review commenced;
- January 30, 2018 – Reviewer comments and recommendations due and received;
- February 20, 2018 – Responses due;
- February 21, 2018 – Responses received;
- **May 10, 2018 – Annual Report presented to the Board;** and
- July 6, 2026 – Expiration of Licence MV2016L3-0001.

**3. Discussion**

On December 20, 2017, the Hamlet submitted its 2016-2017 Annual Water Licence Report (attached) to fulfill Part B, condition 4 and Schedule 1, condition 1 of Licence MV2016L3-0001. This submission is not for Board approval; however, it is being presented as an update to the Board.

**4. Comments**

This submission is the Hamlet’s first under their current Licence. Board staff note that an unusual date was chosen for Annual Report submission at issuance; the Hamlet’s annual deadline is June 30, following the year reported (April 1 – March 31), and as such, this report was submitted late, after its June 30, 2017 deadline.

The Hamlet did not use the annual reporting template developed by Board staff for this submission.

## 5. Reviewer Comments

By January 30, 2018, comments and recommendations on the Annual Report were received from Environment and Climate Change Canada (ECCC), the Government of the Northwest Territories Department of Environment and Natural Resources (GNWT-ENR), and Board staff.

The Hamlet responded on February 21, 2018, after the February 20, 2018 comment response deadline. The Review Summary and Attachments (attached) present the concerns identified through this review.

In summary, review comments focused on the Hamlet's Surveillance Network Program (SNP) sampling and reporting, the Hamlet's inclusion of all reporting requirements under the Annual Report, and several omissions and corrections.

### SNP sampling and reporting

The Hamlet's first Annual Report under MV2016L3-0001 illustrates that the Hamlet should be reminded to ensure that future SNP sampling and reporting be conducted in accordance with the requirements detailed in their Licence MV2016L3-0001 (Comment ID ECCC 1, GNWT-ENR 8, 11 & 12, MVLWB 1 & 3), and that if sampling isn't conducted, rationale should be provided (Comment ID GNWT-ENR 8). Board staff note that the Annual Report template provided to the Hamlet by Board staff in October 2016 includes tables that clearly outline the required sampling frequencies and parameters for all SNP stations.

### Annual Report corrections

In accordance with reviewer comments, the Hamlet agreed to revise the following components of the Annual Report:

- Use the correct Licence references for the current (MV2016L3-0001) and previous (MV2006L3-0002) issuances (Comment ID GNWT-ENR 1, 10);
- Include reference to the two inspections conducted on June 22, 2016 and September 20, 2016 (Comment ID GNWT-ENR 2);
- Clarify the wording in Section 2.2 to indicate that wastewater (sewage) is collected and deposited in the lagoon system via truck (Comment ID GNWT-ENR 4);
- Revise Table 2 to reference the Effluent Quality Criteria listed in Part D, condition 7 of the Licence, and label the columns with the appropriate SNP station numbers (Comment ID MVLWB 1);
- Provide a discussion on the high oil and grease result and any additional confirmatory sampling planned (Comment ID MVLWB 1); and
- Complete reporting in accordance with each requirement listed in Schedule 1, condition 1 of the Licence (Comment ID MVLWB 5).

In addition, the Hamlet could be reminded to include the following for future annual reports:

- A report on the repair of the crack in the floor of the Water Treatment Plant generator room in the 2017-2018 Annual Report (Comment ID GNWT-ENR 3);
- To use the annual reporting template provided by Board staff, or include a concordance table for Licence requirements to ensure that all requirements are reported on (Comment ID GNWT-ENR 11, MVLWB 2); and

- Provide details related to training of Hamlet personnel in spill procedures, or provide rationale for not conducting spill training and communication exercises (Comment ID MVLWB 4).

## 6. Security

Not applicable.

## 7. Conclusion

Board staff conclude that further information was provided by the Hamlet in their responses to reviewer comments; however, the 2016-2017 Annual Report does not address all of the reporting requirements listed in Schedule 1, condition 1 of the Licence. The Board may wish to follow up with the Hamlet based this review.

To increase the likelihood that future annual reports will clearly and sufficiently address the requirements, the Hamlet should be required to revise and resubmit the 2016-2017 Annual Report in accordance with reviewer comments and recommendations, in particular:

1. Rationale for any SNP sampling not conducted in accordance with Licence requirements;
2. Use of correct Licence references for the current (MV2016L3-0001) and previous (MV2006L3-0002) issuances;
3. Reference to the two inspections conducted on June 22, 2016 and September 20, 2016;
4. Clarify the wording in Section 2.2 to indicate that wastewater (sewage) is collected and deposited in the lagoon system via truck;
5. Revise Table 2 to reference the Effluent Quality Criteria listed in Part D, condition 7 of the Licence, and label the columns with the appropriate SNP station numbers;
6. Provide a discussion on the high O&G result and any additional confirmatory sampling planned; and
7. Complete reporting in accordance with each requirement listed in Schedule 1, condition 1 of the Licence.

The Board could also remind the Hamlet to include the following in future annual reports:

- A report on the repair of the crack in the floor of the Water Treatment Plant generator room in the 2017-2018 Annual Report (Comment ID GNWT-ENR 3);
- To use the annual reporting template provided by Board staff, or include a concordance table for Licence requirements to ensure that all requirements are reported on (Comment ID GNWT-ENR 11, MVLWB 2); and
- Provide details related to training of Hamlet personnel in spill procedures, or provide rationale for not conducting spill training and communication exercises (Comment ID MVLWB 4).

## 8. Recommendation

Board staff recommend the Board **acknowledge the 2016-2017 Annual Water Licence Report, as submitted to fulfill Part B, condition 4 and Schedule 1, condition 1 of Water Licence MV2016L3-0001**. The Hamlet is required to submit a revised 2016-2017 Annual Water Licence Report, in accordance with the comments made during this review, for submission by June 30, 2018, along with the 2017-2018 Annual Water Licence Report.

Board staff have prepared a draft response letter (attached), which includes the revisions detailed in the Conclusion section above.

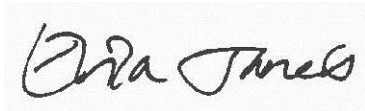
Board staff recommend including the following text in the decision letter:

- The Board acknowledges and appreciates the Hamlet's efforts to fulfill the requirements of their Licence.
- The Hamlet shall adhere to the commitments made in their responses to reviewer comments dated February 21, 2018.

#### 9. Attachments

- [2016-2017 Annual Water Licence Report](#)
- Review Summary and Attachments
- Draft Letter from the Board

Respectfully submitted,

A handwritten signature in black ink that reads "Erica Janes". The signature is written in a cursive style and is placed on a light grey rectangular background.

Erica Janes  
Regulatory Specialist

### Review Comment Table

<b>Board:</b>	MVLWB
<b>Review Item:</b>	Hamlet of Fort Providence - 2016/17 Annual Water Licence Report (MV2016L3-0001)
<b>File(s):</b>	<a href="#">MV2016L3-0001</a>
<b>Proponent:</b>	Hamlet of Fort Providence
<b>Document(s):</b>	<a href="#">MV2016L3-0001 - Fort Providence - 2016-17 Annual Water Licence Report - Dec20-17</a> (218 KB)
<b>Item For Review Distributed On:</b>	Dec 21 at 09:05 <a href="#">Distribution List</a>
<b>Reviewer Comments Due By:</b>	Jan 30, 2018
<b>Proponent Responses Due By:</b>	Feb 20, 2018
<b>Item Description:</b>	<p>The Hamlet of Fort Providence has submitted their first Annual Water Licence Report, covering the period between April 1, 2016 and March 31, 2017, in accordance with Part B, Condition 4 of municipal Water Licence MV2016 L3-0001. Although formal approval of Annual Reports is not required under the Licence, the Board must be satisfied that the Hamlet has reported in accordance with the requirements of their Licence.</p> <p>Reviewers are invited to submit questions, comments and recommendations on the 2016/17 Annual Water Licence Report by <b>January 30, 2018</b>.</p> <p>If you have questions or comments regarding this review or the Online Review System, please contact Erica Janes at (867)766-7466 or <a href="mailto:ejanes@mvlwb.com">ejanes@mvlwb.com</a>.</p>
<b>General Reviewer Information:</b>	<p>In addition to the email distribution list, the following organizations received review material by fax:</p> <ul style="list-style-type: none"> <li>• Fort Liard Metis Local #67 - Ernie McLeod, President (867)770-4573;</li> <li>• Fort Simpson Métis Local #52 - Marie Lafferty, President (867)695-2040;</li> <li>• Hay River Metis Council - Trevor Beck, President (867)874-4472; and</li> <li>• Northwest Territory Métis Nation - Tim Heron, NWTMN IMA Coordinator (867)872-3586.</li> </ul>
<b>Contact Information:</b>	<p>Erica Janes 867-766-7466  Heather Scott 867-766-7463  Jen Potten 867-766-7468</p>

### Comment Summary

Environment and Climate Change Canada: Gabriel Bernard-Lacaille				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Analysis
2	General File	<b>Comment</b> ( <a href="#">doc</a> ) ECCC Comments Cover Letter <b>Recommendation</b>	--	Noted.
1	ECCC 1 - Monitoring and reporting; Hamlet of Fort Providence 2016/2017 Annual Water Licence Report	<b>Comment</b> Part D of the Fort Providence water licence sets out the Effluent Quality Criteria (EQC) for the Surveillance Network Program (SNP) station 1412-2. Parameters include suspended solids, oil and grease, Carbonaceous Biochemical Oxygen Demand (CBOD), fecal coliforms, and pH. As per the Surveillance Network Program, SNP station 1412-2 (site of compliance) is to be sampled prior to discharge and weekly during discharge for pH, CBOD5, total suspended solids, ammonia, total phosphorus, nitrate, nitrite, fecal coliforms, oil and grease. Table 2 of the 2016/2017 annual report summarizes the analytical results of lagoon testing. Although the SNP station number is not indicated in Table 2, these results represent SNP station 1412-2. ECCC notes the following observations: - Several of the required sampling parameters for SNP station 1412-2 are either not included in Table 2 (i.e., pH, CBOD5, total suspended solids, fecal coliforms) or are reported as "not tested" (i.e., ammonia, nitrate, nitrite, total phosphorus); - There appears to have been no weekly monitoring of SNP station 1412-2 during discharge. Appendix C of the annual report indicates that sewage lagoon	<b>Feb 21:</b> The Hamlet shall review its approach to implementing the SNP if required by the Board.	The Hamlet should be reminded to ensure that future SNP sampling and reporting be conducted in accordance with the requirements detailed in MV2016L3-0001.

		<p>decanting occurred from October 13 to November 18, 2016. However, sampling of the compliance site (SNP station 1412-2) is only reported for dates prior to October 13, 2016. - Additionally, the majority of the results listed in Table 2 report "not tested" (28 of 36 results indicate "not tested"). -A footnote to Table 2 states that CBOD5 is new to MV2016L3-0001 and is used as an equivalent to BOD5. This is not an accurate statement, as CBOD5 is a component of BOD5 and should be tested and reported accordingly. Future annual water licence reports should provide summarized and raw sampling results for all SNP sampling parameters in accordance with the water licence requirements.</p> <p><b>Recommendation</b> ECCC recommends that the Hamlet review its approach to implementing the Surveillance Network Program (SNP) in order to ensure that future SNP sampling and reporting will be conducted in accordance with water licence requirements.</p>		
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**GNWT - ENR: Central Email GNWT**

<b>ID</b>	<b>Topic</b>	<b>Reviewer Comment/Recommendation</b>	<b>Proponent Response</b>	<b>Board Staff Analysis</b>
13	General File	<p><b>Comment</b> (<a href="#">doc</a>) ENR Letter with Comments and Recommendations</p> <p><b>Recommendation</b></p>	--	Noted.
1	Topic 1: Incorrect Water Licence Number Reference	<p><b>Comment</b> In Section 1.0 (Introduction) it was noted that the previous Water Licence file number referenced is incorrect. It should read MV2006L3-0002, not MV2016L3-0001. The Water</p>	<p><b>Feb 21:</b> Noted. The Annual Report will be updated to correct the error.</p>	<p>Acceptable response. The Hamlet should revise the Annual Report to include the correct Licence number.</p>

		<p>Licence renewal issued in July 2016 for Water Licence MV2016L3-0001, replaces the previous Water Licence, MV2006L3-0002.</p> <p><b>Recommendation 1)</b> ENR recommends that the Annual Report (the Report) be updated to correct the above noted error.</p>		
2	<p>Topic 2: Water Treatment Plant not Inspected by Regulators in 2016</p>	<p><b>Comment</b> In Section 2.3.1 (Water Treatment Facility) it was noted that no inspection of the Water Treatment Plant was conducted in 2016, this statement is not correct. Water Licence inspections were conducted on June 22nd and September 20th, 2016 by the Inspector. The Water Treatment Plant was inspected on both occasions and a raw water sample was collected as well. The Inspector met with SAO, Susan Christie on Sept 20th to discuss Water Licence issues and changes to the Water Licence since the renewal in July 2016.</p> <p><b>Recommendation 1)</b> ENR recommends that the report be updated to note that two Water Licence inspections were conducted on June 22nd and September 20th, 2016. The Inspector can be contacted regarding inspection findings.</p>	<p><b>Feb 21:</b> Noted. The Annual Report will be updated to include these omissions.</p>	<p>Acceptable response. The Hamlet should revise the Annual Report to note the two 2016 Inspections.</p>
3	<p>Topic 3: WTP Generator Room Floor Above Reservoir Requires Repair</p>	<p><b>Comment</b> In Section 2.3.1 (Water Treatment Facility) reference to the crack in the floor of the generator room (located above the drinking water reservoir) was noted. This crack has been a long standing issue that has not been rectified since it was first noted at an inspection in 2013. The Hamlet claims they are working with MACA on developing a plan to repair the crack, but nothing has happened to date. If a spill</p>	<p><b>Feb 21:</b> ENRs recommendation is noted.</p>	<p>The Hamlet should be reminded to report on the repair of the crack in the floor of the Water Treatment Plant generator room in the 2017-18 Annual Report.</p>



		<p>were to occur in the generator room, this could contaminate the potable water reservoir. ENR suggests MACA-GNWT and the Hamlet work together to get repairs completed as soon as feasible.</p> <p><b>Recommendation 1)</b> ENR recommends that the Hamlet works in collaboration with MACA-GNWT to ensure repairs to the generator room floor are completed as soon as feasible in order to remove the risk of contaminating the potable water reservoir in the event of a spill.</p>		
4	Topic 4: Sewage Waste Inputs and Tracking	<p><b>Comment</b> In Section 2.2 (Quantity of Waste Generated) it is not indicated how the figure of 24,754 m3 (6,539,300 US gallons) was obtained. Is this volume based on truck loads? Is this information tracked and obtained through the Contractor (Digaa Enterprises Ltd.)? Please indicate how the volume figure reported is tracked and obtained. Input loads/trips should be accurately logged and tracked in order to report more accurate volumes in the Annual Reports.</p> <p><b>Recommendation 1)</b> ENR recommends that the Hamlet update Section 2.2 of the Report to indicate that wastewater (sewage) is collected and deposited in lagoon system via truck.</p>	<p><b>Feb 21:</b> Section 2.2 of the Annual Report states the noted "volume is for sewage services provided through the Hamlet's service contract with Digaa Enterprises Ltd" and refers to Appendix B, which contains a table that presents the monthly trucked volumes of sewage deposited at the lagoon. The Annual Report will be updated to clarify the wording in Section 2.2 if required by the Board.</p>	The Hamlet should revise the Annual Report to clarify the wording in Section 2.2.
5	None	<p><b>Comment</b> None</p> <p><b>Recommendation 2)</b> ENR recommends that the Hamlet have the Contractor log/track the number of loads deposited per day at the lagoon on a tracking sheet and provide this information to the Hamlet Works Foreman to ensure a more</p>	<p><b>Feb 21:</b> ENRs recommendation is noted.</p>	Acceptable response.

		accurate reporting of sewage volumes.		
6	Topic 5: Sewage Lagoon Decant Volume Tracking	<p><b>Comment</b> In Section 2.2.1 (Quantities of Wastewater Removed from Lagoons) it isn't indicated how the figure of 31,410 m<sup>3</sup> was obtained. Is this volume based on the estimated flow rate of 120 m<sup>3</sup>/hour? Please indicate how the volume figure reported was obtained. In addition, the Hamlet should consider using a larger, metered pump to expedite the decant process and more accurately track volumes decanted to the receiving environment.</p> <p><b>Recommendation 1)</b> ENR recommends that the Hamlet update Section 2.2.1 of the Report to indicate that decanted volumes are based on an estimated flow rate.</p>	<p><b>Feb 21:</b> Section 2.2.1 of the Annual Report states decanting operations were conducted "at an estimated flowrate of 120 m<sup>3</sup>/hour". Decant logs are provided in Appendix C with daily pumpout volume estimates. The section will be updated with further details if required by the Board.</p>	Acceptable response.
7	None	<p><b>Comment</b> None</p> <p><b>Recommendation 2)</b> ENR recommends that the Hamlet use a larger, metered pump to expedite the decant process, and for more accurate reporting of decant volumes.</p>	<p><b>Feb 21:</b> ENRs recommendation is noted.</p>	Noted.
8	Topic 6: SNP Data	<p><b>Comment</b> It was noted in Section 2.4 (SNP Data) that no samples were collected at SNP stations 2016-1, 2016-2 or 2016-3. Please indicate why sampling was not completed. The aforementioned SNP stations were identified at the spring 2017 Water Licence inspection, and shown to the Hamlet Works Foreman during the fall 2017 Water Licence inspection. Now that the SNP station locations have been identified, the Hamlet needs to ensure that the SNP stations are sampled at the Water Licence</p>	<p><b>Feb 21:</b> ENRs recommendation is noted.</p>	The Hamlet should provide rationale for why sampling was not completed in accordance with Licence SNP requirements. In addition, the Hamlet should be reminded to conduct SNP sampling in accordance with Licence requirements.

		<p>prescribed frequency to provide a better picture of water quality at the landfill and post wetland treatment.</p> <p><b>Recommendation 1)</b> ENR recommends that the Hamlet sample SNP stations 2016-1, 2016-2 and 2016-3 at the Water Licence prescribed frequency in order to provide a better overview of water quality at the landfill and post wetland treatment prior to drainage into the Mackenzie River.</p>		
9	Topic 7: Sewage Lagoon Decant Authorization and Water Licence Number Corrections.	<p><b>Comment</b> It was noted in Section 3.0 (Summary) that permission to decant in October was granted by the Mackenzie Valley Land and Water Board (MVLWB). Authorization to decant was provided to the Hamlet via the Inspector as per the Water Licence condition in Part D Item 8. Record of the approval/authorization to decant is provided in Appendix D of the report (pg. 21). In addition, two typos were noted in this Section of the Report. The Water Licence number referenced twice in this Section read 'MW2016L3-0001'. It should read MV2016L3-0001. Please update this Section of the Report.</p> <p><b>Recommendation 1)</b> ENR recommends that the Hamlet continue to forward lagoon decant requests (along with associated sample results) to the Inspector for approval as per Part D Item 8 of the current Water Licence, MV2016L3 -0001.</p>	<b>Feb 21:</b> ENRs recommendation is noted.	Board staff note that the authorization to decant was sent from the Inspector to the Hamlet (on October 13, 2016), following Board staff's confirmation with the Inspector that there were no concerns (earlier the same day).
10	None	<p><b>Comment</b> None</p> <p><b>Recommendation 2)</b> ENR recommends that the Hamlet update Section 3.0 of the Report to indicate the correct Water</p>	<b>Feb 21:</b> Noted. The Hamlet will update Section 3.0 to indicate the correct water licence number.	Acceptable response.  The Hamlet should correct the Licence

		Licence file number, MV2016L3-0001.		number in the revised Annual Report.
11	Topic 8: Table 2 Analytical Results from Lagoons	<p><b>Comment</b> Analytical parameters reported in Table 2 of the 2016/2017 Annual Report do not align with EQC or SNP 1412-2 sampling requirements. Part D, Item 7 of the Water Licence (EQCs limits) and the SNP Section (p. 25 of 42), provide a list of parameters to be monitored at SNP 1412-2. No results were provided for the compliance parameters of TSS, CBOD (not BOD), FC and pH. Other parameters such as Total Suspended Solids, Ammonia, Total Phosphorus, Nitrate &amp; Nitrite are also to be monitored and reported annually for SNP 1412-2, as per Part C of the SNP section. While BTEX and Total Petroleum Hydrocarbons are only currently required at other SNP stations established to monitor Solid Waste Facilities effluents (SNP 2016-2 and SNP 2016-3), Table 2 - Summary of Analytical Results Taken from Lagoons of the Report should specifically report on the EQC listed in the Water Licence to determine if the sewage/wastewater discharge was compliant with Water Licence limits.</p> <p><b>Recommendation 1)</b> ENR recommends that the Report specifically include analyses of wastewater discharge quality against Water Licence EQC, as per Part D Item 7 of the Water Licence. The compliance sample list includes: Suspended Solids,</p>	Feb 21: ENRs recommendation is noted.	<p>The Hamlet should be reminded to sample and report in accordance with the Licence SNP requirements, particularly for SNP station 1412-2, which is the point of compliance and has EQC written into the Licence for Suspended Solids, Oil and Grease, CBOD, Faecal Coliforms, and pH (see Part D, condition 7).</p> <p>The Annual Report template provided to the Hamlet by Board staff in October 2016 includes tables that clearly outline the required sampling frequencies and parameters for all SNP stations. The Hamlet could be reminded to use the annual reporting template.</p>

		Oil & Grease, CBOD, Faecal Coliforms, and pH		
12	None	<b>Comment</b> None <b>Recommendation</b> 2) ENR recommends that the Report also include monitoring results for Ammonia, Total Phosphorus, Nitrate and Nitrite, as required under Part C of the SNP Section for SNP 1412-2.	<b>Feb 21:</b> ENRs recommendation is noted.	See Comment ID GNWT-ENR 11 above.
<b>MVLWB: Erica Janes</b>				
<b>ID</b>	<b>Topic</b>	<b>Reviewer Comment/Recommendation</b>	<b>Proponent Response</b>	<b>Board Staff Analysis</b>
1	Table 2: SNP summary	<b>Comment</b> Board staff note that Table 2 contains some analytical results for 'sewage' and 'pre-decant' but does not include corresponding SNP station numbers. The Hamlet has mentioned on the previous page that SNP samples were not taken so it isn't clear where the data is from. Table 2 also includes 'Water Licence Requirements' that do not correspond with the EQC listed in the Licence for SNP station 1412-2. In addition, the analytical results for 'sewage' for HEM - O&G are over the listed 'Water Licence Requirement' (Part D, condition 7 of the Licence lists an EQC for Oil and Grease at 5 mg/L). <b>Recommendation</b> Please revise Table 2 to reference the EQC listed in Part D, condition 7 of the Licence, and label the results column with the appropriate SNP station numbers, to reflect the Licence. Please provide a discussion on the high HEM - O&G result, and any additional sampling planned to confirm these results.	<b>Feb 21:</b> Noted. Table 2 will be revised as stated. A discussion on the high O & G result and any additional sampling planned will be included if required by the Board.	See Comment ID GNWT-ENR 11 and 12 above.  The Hamlet should revise Table 2 and include a discussion on the high O&G result and any additional confirmatory sampling planned.
2	Report format	<b>Comment</b> Board staff note that inclusion of a concordance table,	<b>Feb 21:</b> The Hamlet acknowledges the	For all future annual reports, the Hamlet

		<p>which demonstrates where in the Annual Report each condition listed in Schedule 1 of the Licence can be found, would be helpful to reviewers.</p> <p><b>Recommendation</b> Please provide a concordance table in all future Annual Reports, which demonstrates which section in the AR addresses each component required in Schedule 1, condition 1 of the Licence. Alternatively, the Hamlet could report using the Annual Report template developed by Board staff and provided to the Hamlet.</p>	<p>MVLWBs comment and will include a concordance table in future annual reports if required by the Board.</p>	<p>should either use the annual reporting template provided by Board staff, or include a concordance table for Licence requirements, to ensure that all requirements are reported on.</p>
3	Section 2.4 SNP data	<p><b>Comment</b> The AR states that 'no sampling at stations 2016-1, 2016-2 and 2016-3 was conducted in the 2016/2017 fiscal year.'</p> <p><b>Recommendation</b> In the 2017-18 Annual Report, please provide analytical results in accordance with Licence SNP requirements, or provide rationale for not sampling according to the Licence SNP.</p>	<p><b>Feb 21:</b> Noted for 2017/2018.</p>	<p>Acceptable response.</p> <p>See Comment ID GNWT-ENR 11 &amp; 12, and MVLWB 1.</p>
4	Section 2.6 Spill Training and Communications Exercises	<p><b>Comment</b> Board staff note that no spill training and communication exercises were carried out for Hamlet personnel in the reporting period.</p> <p><b>Recommendation</b> In the 2017-18 Annual Report, please provide details related to training of Hamlet personnel in spill procedures, or provide rationale for not conducting spill training and communication exercises.</p>	<p><b>Feb 21:</b> Noted for 2017/2018.</p>	<p>Acceptable response.</p>
5	Report completeness	<p><b>Comment</b> Board staff note that the following requirements of Schedule 1, condition 1 of the Licence were not addressed in the AR: - (d) the monthly and annual quantities of all Sewage</p>	<p><b>Feb 21:</b> The Hamlet will revise the Annual Report to include the noted omissions if required by the Board.</p>	<p>The Hamlet should revise and resubmit the 2016-2017 Annual Report to include all of the reporting requirements listed in</p>

		<p>and solid Waste deposited into the Waste Disposal Facilities by commercial and industrial operators working outside the municipal boundaries of Fort Providence; - (g) a map showing SNP station locations; - (h) a summary of activities undertaken to install and maintain fencing at the Waste Disposal Facilities; - (i) a summary of activities undertaken to install and maintain signage at the Waste Disposal Facilities and SNP stations; - (j) a summary of sludge management activities including results of depth and volume measurements, sludge removal and treatment; - (k) a summary of Construction activities conducted in accordance with Part F of the Licence; and - (q) a summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector.</p> <p><b>Recommendation</b> Please revise the Annual Report to address each of the Annual Reporting requirements listed in Schedule 1, condition 1 of the Licence.</p>		<p>Schedule 1, condition 1 of the Licence.</p>
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January 30, 2018

Erica Janes  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor – 4910 50<sup>th</sup> Avenue  
P.O. Box 2130  
Yellowknife, NT  
X1A 2P6

Dear Ms. Janes,

**Re: Hamlet of Fort Providence (the Hamlet)  
Water Licence – MV2016L3-0001  
2016/17 Annual Water Licence Report  
Request for Review and Comments**

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

**Topic 1: Incorrect Water Licence Number Reference**

**Comment(s):**

In Section 1.0 (Introduction) it was noted that the previous Water Licence file number referenced is incorrect. It should read MV2006L3-0002, not MV2016L3-0001. The Water Licence renewal issued in July 2016 for Water Licence MV2016L3-0001, replaces the previous Water Licence, MV2006L3-0002.

**Recommendation(s):**

- 1) ENR recommends that the Annual Report (the Report) be updated to correct the above noted error.



## **Topic 2: Water Treatment Plant not Inspected by Regulators in 2016**

### **Comment(s):**

In Section 2.3.1 (Water Treatment Facility) it was noted that no inspection of the Water Treatment Plant was conducted in 2016, this statement is not correct. Water Licence inspections were conducted on June 22<sup>nd</sup> and September 20<sup>th</sup>, 2016 by the Inspector. The Water Treatment Plant was inspected on both occasions and a raw water sample was collected as well. The Inspector met with SAO, Susan Christie on Sept 20<sup>th</sup> to discuss Water Licence issues and changes to the Water Licence since the renewal in July 2016.

### **Recommendation(s):**

- 1) ENR recommends that the report be updated to note that two Water Licence inspections were conducted on June 22<sup>nd</sup> and September 20<sup>th</sup>, 2016. The Inspector can be contacted regarding inspection findings.

## **Topic 3: WTP Generator Room Floor Above Reservoir Requires Repair**

### **Comment(s):**

In Section 2.3.1 (Water Treatment Facility) reference to the crack in the floor of the generator room (located above the drinking water reservoir) was noted. This crack has been a long standing issue that has not been rectified since it was first noted at an inspection in 2013. The Hamlet claims they are working with MACA on developing a plan to repair the crack, but nothing has happened to date. If a spill were to occur in the generator room, this could contaminate the potable water reservoir. ENR suggests MACA-GNWT and the Hamlet work together to get repairs completed as soon as feasible.

### **Recommendation(s):**

- 1) ENR recommends that the Hamlet works in collaboration with MACA-GNWT to ensure repairs to the generator room floor are completed as soon as feasible in order to remove the risk of contaminating the potable water reservoir in the event of a spill.

## **Topic 4: Sewage Waste Inputs and Tracking**

### **Comment(s):**

In Section 2.2 (Quantity of Waste Generated) it is not indicated how the figure of 24,754 m<sup>3</sup> (6,539,300 US gallons) was obtained. Is this volume based on truck loads? Is this information tracked and obtained through the Contractor (Digaa

Enterprises Ltd.)? Please indicate how the volume figure reported is tracked and obtained.

Input loads/trips should be accurately logged and tracked in order to report more accurate volumes in the Annual Reports.

**Recommendation(s):**

- 1) ENR recommends that the Hamlet update Section 2.2 of the Report to indicate that wastewater (sewage) is collected and deposited in lagoon system via truck.
- 2) ENR recommends that the Hamlet have the Contractor log/track the number of loads deposited per day at the lagoon on a tracking sheet and provide this information to the Hamlet Works Foreman to ensure a more accurate reporting of sewage volumes.

**Topic 5: Sewage Lagoon Decant Volume Tracking**

**Comment(s):**

In Section 2.2.1 (Quantities of Wastewater Removed from Lagoons) it isn't indicated how the figure of 31,410 m<sup>3</sup> was obtained. Is this volume based on the estimated flow rate of 120 m<sup>3</sup>/hour? Please indicate how the volume figure reported was obtained.

In addition, the Hamlet should consider using a larger, metered pump to expedite the decant process and more accurately track volumes decanted to the receiving environment.

**Recommendation(s):**

- 1) ENR recommends that the Hamlet update Section 2.2.1 of the Report to indicate that decanted volumes are based on an estimated flow rate.
- 2) ENR recommends that the Hamlet use a larger, metered pump to expedite the decant process, and for more accurate reporting of decant volumes.

**Topic 6: SNP Data**

**Comment(s):**

It was noted in Section 2.4 (SNP Data) that no samples were collected at SNP stations 2016-1, 2016-2 or 2016-3. Please indicate why sampling was not completed.

The aforementioned SNP stations were identified at the spring 2017 Water Licence inspection, and shown to the Hamlet Works Foreman during the fall 2017 Water Licence inspection.

Now that the SNP station locations have been identified, the Hamlet needs to ensure that the SNP stations are sampled at the Water Licence prescribed frequency to provide a better picture of water quality at the landfill and post wetland treatment.

**Recommendation(s):**

- 1) ENR recommends that the Hamlet sample SNP stations 2016-1, 2016-2 and 2016-3 at the Water Licence prescribed frequency in order to provide a better overview of water quality at the landfill and post wetland treatment prior to drainage into the Mackenzie River.

**Topic 7: Sewage Lagoon Decant Authorization and Water Licence Number Corrections.**

**Comment(s):**

It was noted in Section 3.0 (Summary) that permission to decant in October was granted by the Mackenzie Valley Land and Water Board (MVLWB). Authorization to decant was provided to the Hamlet via the Inspector as per the Water Licence condition in Part D Item 8. Record of the approval/authorization to decant is provided in Appendix D of the report (pg. 21).

In addition, two typos were noted in this Section of the Report. The Water Licence number referenced twice in this Section read 'MW2016L3-0001'. It should read MV2016L3-0001. Please update this Section of the Report.

**Recommendation(s):**

- 1) ENR recommends that the Hamlet continue to forward lagoon decant requests (along with associated sample results) to the Inspector for approval as per Part D Item 8 of the current Water Licence, MV2016L3 -0001.
- 2) ENR recommends that the Hamlet update Section 3.0 of the Report to indicate the correct Water Licence file number, MV2016L3-0001.

**Topic 8: Table 2 – Analytical Results from Lagoons**

**Comment(s):**

Analytical parameters reported in Table 2 of the 2016/2017 Annual Report do not align with EQC or SNP 1412-2 sampling requirements. Part D, Item 7 of the Water

Licence (EQCs limits) and the SNP Section (p. 25 of 42), provide a list of parameters to be monitored at SNP 1412-2. No results were provided for the compliance parameters of TSS, CBOD (not BOD), FC and pH. Other parameters such as Total Suspended Solids, Ammonia, Total Phosphorus, Nitrate & Nitrite are also to be monitored and reported annually for SNP 1412-2, as per Part C of the SNP section.

While BTEX and Total Petroleum Hydrocarbons are only currently required at other SNP stations established to monitor Solid Waste Facilities effluents (SNP 2016-2 and SNP 2016-3), Table 2 - *Summary of Analytical Results Taken from Lagoons* of the Report should specifically report on the EQC listed in the Water Licence to determine if the sewage/wastewater discharge was compliant with Water Licence limits.

**Recommendation(s):**

- 1) ENR recommends that the Report specifically include analyses of wastewater discharge quality against Water Licence EQC, as per Part D Item 7 of the Water Licence.

The compliance sample list includes:

- Suspended Solids,
- Oil & Grease,
- CBOD,
- Faecal Coliforms, and
- pH

- 2) ENR recommends that the Report also include monitoring results for Ammonia, Total Phosphorus, Nitrate and Nitrite, as required under Part C of the SNP Section for SNP 1412-2.

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

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email [patrick.clancy@gov.nt.ca](mailto:patrick.clancy@gov.nt.ca).

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Clancy', written in a cursive style.

Patrick Clancy  
Environmental Regulatory Analyst  
Environmental Assessment and Monitoring Section  
Conservation, Assessment and Monitoring Division  
Department of Environment and Natural Resources  
Government of the Northwest Territories



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

ECCC File: 5200 000 025 /002  
MVLWB File: MV2016L3-0001

January 30, 2018

Via online submission

Jen Potten  
Regulatory Coordinator  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4922 48<sup>th</sup> Street  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

Dear Ms. Potten:

**RE: MV2016L3-0001 – Hamlet of Fort Providence – Municipal Water Licence –  
2016/2017 Annual Water Licence Report**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Mackenzie Land and Water Board regarding the above-mentioned 2016/2017 Annual Water Licence Report and is submitting comments via the online review system. ECCC's specialist advice is provided based on our mandate, in the context of 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) 669-4746 or [Gabriel.Bernard-Lacaille@canada.ca](mailto:Gabriel.Bernard-Lacaille@canada.ca).

Sincerely,

*[original signed by]*

Gabriel Bernard-Lacaille  
Environmental Assessment Coordinator

Attachment(s): ECCC's Comments Excel Sheet

cc: Melissa Pinto, Senior Environmental Assessment Coordinator  
Georgina Williston, Head, Environmental Assessment North (NT and NU)