

Review Comment Table

Board:	WLWB
Review Item:	Community Government of Wekweētā - Water Supply Facility - Operation and Maintenance Plan - Version 3.0 (W2017L3-0001)
File(s):	W2017L3-0001
Proponent:	Community Government of Wekweeti
Document(s):	Cover Letter (214 KB) Part 1 (4.78 MB) Part 2 (8.51 MB) Part 3 (2.4 MB) Part 4 (9.4 MB) Part 5 (12.12 MB) Part 6 (21.09 MB) Part 7 (11.69 MB)
Item For Review Distributed On:	June 18 at 13:08 Distribution List
Reviewer Comments Due By:	July 10, 2020
Proponent Responses Due By:	July 17, 2020
Item Description:	<p>The Community Government of Wekweeti (CGW) submitted Version 3.0 of its Operation and Maintenance Plan (O&M Plan) for the new Water Supply Facility (WSF) on May 27, 2020. This plan is required as per the July 2, 2019 Reasons for Decision where the Board directed the CGW to submit Version 3.0 of the WSF O&M Plan at least 90 days prior to beginning operations of the new WSF. The Community Government of Wekweeti is planning to get a new Water Supply Facility this summer. The July 2, 2019 Reasons for Decision required that Version 3.0 include details on the following:</p> <ul style="list-style-type: none"> • the estimated monthly quantity of backwash, and how backwash is disposed of;and • whether sludge is expected to be produced by the WSF, and if so, identify whether sludge composition data is available (e.g., from an existing WSF), how much sludge is expected to be disposed monthly, and how sludge will be disposed of.

Contact Information:	<p>Please note that the CGW is also currently in a Type B Water Licence proceeding to consider the discharge of waste from the new WSF.</p> <p>Using the Online Review System (ORS), reviewers are invited to submit comments and recommendations on the documents linked below by the review comment deadline specified. Reviewers may also wish to consider providing an overarching recommendation regarding whether the Board should approve the submission, to provide context for the comments and recommendations and assist the Board with its decision. If reviewers seek clarification on the submission, they are encouraged to correspond directly with the Applicant prior to submitting comments and recommendations.</p> <p>All documents that have been uploaded to this review are also available on our public Registry. If you have any questions or comments about the ORS or this review, please contact Board staff identified below.</p>
Contact Information:	<p>Anneli Jokela 867-765-4588 Jessica Pacunayen 867-765-4591</p>

Comment Summary

Environment and Climate Change Canada: Eva Walker				
ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	General File	Comment (doc) ECCC Cover Letter Recommendation		
2	Wekweeti Water Treatment Plant Operation and Maintenance Manual (May 2020)	Comment Per the Water Treatment Plant operation and maintenance manual, the backwash procedure consists of scouring the outside of the membrane fibres with air, backpulsing the membranes with water and gravity draining the membrane tanks to waste. Approximately 620 L of wastewater is produced after each backwash operation; two to three backwashes per operational day are anticipated. Thus, the backwash wastewater volume generated is approximately 1200 - 1800 L. This water is discharged on the ground by the backwash	July 17: Noted. The backwash discharge pipe will be directed away from the source water body. Gravel and riprap splash pad will be placed at the point of discharge to break the velocity thereby ensuring no soil erosion.	

		<p>pipe a few meters away from the WTP building. It is not clear from the Water Treatment Plant operation and maintenance manual whether backwash discharges could reach surface waterbodies, nor whether there is potential for surface erosion.</p> <p>Recommendation ECCC recommends that the proponent discharge the backwash discharge so that there is no surface erosion or residuals washed into any waterbodies.</p>		
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GNWT - ENR - EAM (Environmental Assessment and Monitoring): Central Email GNWT

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
7	General File	<p>Comment (doc) ENR Letter with Comments and Recommendations</p> <p>Recommendation</p>		
1	Topic 1: Research on Risks Associated with Water Supply Facilities' Wastes	<p>Comment As specified during a separate review (Gameti's Characterization and Testing Plan, Section 2, p. 7), a "Research team at Dalhousie University has been engaged by MACA, ENR and the MVLWB to study impacts of Water Treatment Plant (WTP) residuals wastes to the environment across NWT. The initial report is expected by end of the summer, 2020. The study will be outlining recommendations on best practices and whether there would be value in additional long-term sampling." Outcomes from this collaborative research project should be informative regarding recommended approaches to best manage wastes from WTP (or Water Supply Facility (WSF), in the NWT.</p> <p>Recommendation 1) As part of the current</p>	<p>July 17: Noted.</p>	

		<p>review, or should Water Licence (W2017L3-0001) updates be required in the future, ENR recommends that the Board consider recommendations and research findings regarding the above mentioned collaborative work, to inform on best waste management practices and associated risks (if any).</p>		
2	<p>Topic 2: Water Treatment “ Coagulants and Flocculants</p>	<p>Comment When used, coagulants/flocculants residuals alter the chemical composition of backwash discharges as well as other WTP wastes. WTP using coagulant injections would also be generating sedimentation deposits leading to the formation of sludge, thus creating another type of WTP waste. In their August 19, 2019 WLWB Reasons for Decision for Community Government of Gameti's (Gameti) Water Licence (W2018L3-0001), who underwent a Water Supply Facility upgrade last year, and similar to what the Community Government of Wekweèti (Wekweèti) is undergoing this year, the Board requested that all references to aluminum salts coagulants/flocculants be removed from Gameti's next version of their WSF O&M Plan. While references to aluminum salts have been removed throughout the current Wekweèti WSF O&M Plan, a few references to coagulants and flocculants remain in Part 1 and Part 2 Technical O&M Manuals. For example, reference to coagulant is made in Sections 3.2, 3.4, 3.19.3, 5.1, 5.2, 6.2.6. The bottom of Table 3.1 also specifies that a provision exists in</p>	<p>July 17: Noted. There will not be any use of coagulants and flocculants at any point during the duration of current Water License.</p>	

		<p>the O&M Plan for the use of flocculants.</p> <p>Recommendation 1) ENR recommends that Wekweèti specify if coagulants and flocculants will be used at any point during the duration of their current Water Licence (W2017L3-0001).</p>		
3	None	<p>Comment None</p> <p>Recommendation 2) Should coagulants be used during the term of the Water Licence, ENR recommends that condition(s) be added to the Water Licence, as appropriate, via a Water Licence amendment, in order to adequately capture these operations.</p>	July 17: Noted.	
4	None	<p>Comment None</p> <p>Recommendation 3) Should Wekweèti re-iterate that no coagulants/flocculants will be used for the duration of the current Water Licence, details not yet removed in Part 1 & Part 2 of the WTP O&M Technical Manual referring to components, should be removed to prevent regulatory inconsistencies as requested in the Board Reasons for Decision for the Gameti Water Licence (W2018L3-0001).</p>	July 17: Noted. All reference to coagulants/flocculants will be removed from Part 1,2&3 of the O&M.	
5	None	<p>Comment None</p> <p>Recommendation 4) Finally, recommendations relating to management and monitoring best practices for backwash, wastewater and/or spent CIP, may require revisiting to consider GNWT/MVLWB collaborative work and Dalhousie University research findings and recommendations.</p>	July 17: Noted.	

6	Topic 3: Water Treatment “Aeration Tanks vs. Flocculation Tanks	<p>Comment While reference to flocculation tanks have mainly been replaced by aeration tanks in the document, a few references to Floc tank remain (eg. Technical O&M Manual - Part 1 Figure 6.2, 6.2.2, Part 2 in p. 30, 30 and 34 of 37). As well, although sections such as 5.1, 3.19.3 are referring to aeration tanks, the process described in these sections is still referring to the mixing of coagulants.</p> <p>Recommendation 1) ENR recommends that Wekweeti specify if the updated WTP Technical O&M Manual “Part 1 and Part 2 are referring to two different types of tanks (aeration tank and Floc tank), or if remaining references to the floc tank have not yet been removed to reflect the use of only one type of tank (i.e. the aeration tank).</p>	<p>July 17: Noted. All reference to Floc tank will be removed and replaced with “Aeration Tank”; from the O&M part 1,2&3. This includes Part 1 - Section 3.1, 3.4, 3.19.3 and 5.1, Figure 6.2, 6.2.2, Part 2 - P&I diagram and Part 3 - electrical line diagrams.</p>	
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Tlicho Government: LONGINUS EKWE

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Community Government of Wekweeti- O and M Plan Version 3.0 (W2017L3-0001)	<p>Comment TG has no comments.</p> <p>Recommendation TG has no recommendations.</p>	<p>July 17: Noted.</p>	

Wek' eezhii Renewable Resources Board: Laura Meinert

ID	Topic	Reviewer Comment/Recommendation	Proponent Response	Board Staff Response
1	Community Government of Wekweeti - Water Supply Facility - Operation and Maintenance Plan - Version 3.0	<p>Comment The WRRB has no comments at this time.</p> <p>Recommendation The WRRB has no recommendations at this time.</p>	<p>July 17: Noted.</p>	

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

ECCC File: 5200 000 032/002
SLWB File: W2017L3-0001



June 30, 2020

via online review system

Anneli Jokela
Regulatory Specialist
Wek'èezhii Land and Water Board
1-4905 48th Street
Yellowknife, NT X1A 3S3

Dear Anneli Jokela:

RE: W2017L3-0001 – Community Government of Wekweètì – Water Supply Facility - Operation and Maintenance Plan

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Wek'èezhii Land and Water Board (WLWB) by Community Government of Wekweètì (the proponent) regarding the above-mentioned Operation and Maintenance Plan. ECCC's has uploaded our comments to the WLWB's online review system.

ECCC's bases our specialist advice on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

If you need more information, please contact Eva Walker at (867) 669-4474 or Eva.Walker@Canada.ca.

Sincerely,

[Original signed by]

Eva Walker
A/Senior Environmental Assessment Coordinator

Attachment(s): ECCC Comments Excel Sheet

cc: John Olyslager, Acting Head, Environmental Assessment North (NT and NU)





July 10, 2020

Joseph Mackenzie
Chair
Wek'èezhì Land and Water Board
#1-4905 48th Street
Yellowknife, NT
X1A 3S3

Dear Mr. Mackenzie,

**Re: Community Government of Wekweèti
Water Licence – W2017L3-0001
Water Supply Facility - Operation and Maintenance Plan - Version 3.0
Request for Review and Comments**

The Department of Environment and Natural Resources, Government of the Northwest Territories has reviewed the plan 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* provides the following comments and recommendations for the consideration of the Board.

Topic 1: Research on Risks Associated with Water Supply Facilities' Wastes

Comment(s):

As specified during a separate review (Gameti's Characterization and Testing Plan, Section 2, p. 7), a "Research team at Dalhousie University has been engaged by MACA, ENR and the MVLWB to study impacts of Water Treatment Plant (WTP) residuals wastes to the environment across NWT. The initial report is expected by end of the summer, 2020. The study will be outlining recommendations on best practices and whether there would be value in additional long-term sampling."

Outcomes from this collaborative research project should be informative regarding recommended approaches to best manage wastes from WTP (or Water Supply Facility (WSF), in the NWT.

Recommendation(s):

- 1) As part of the current review, or should Water Licence (W2017L3-0001) updates be required in the future, ENR recommends that the Board consider recommendations and research findings regarding the above mentioned collaborative work, to inform on best waste management practices and associated risks (if any).

Topic 2: Water Treatment – Coagulants and Flocculants

Comment(s):

When used, coagulants/flocculants residuals alter the chemical composition of backwash discharges as well as other WTP wastes. WTP using coagulant injections would also be generating sedimentation deposits leading to the formation of sludge, thus creating another type of WTP waste.

In their August 19, 2019 WLWB Reasons for Decision for Community Government of Gameti's (Gameti) Water Licence (W2018L3-0001), who underwent a Water Supply Facility upgrade last year, and similar to what the Community Government of Wekweèti (Wekweèti) is undergoing this year, the Board requested that all references to aluminum salts coagulants/flocculants be removed from Gameti's next version of their WSF O&M Plan.

While references to aluminum salts have been removed throughout the current Wekweèti WSF O&M Plan, a few references to coagulants and flocculants remain in Part 1 and Part 2 Technical O&M Manuals. For example, reference to coagulant is made in Sections 3.2, 3.4, 3.19.3, 5.1, 5.2, 6.2.6. The bottom of Table 3.1 also specifies that a provision exists in the O&M Plan for the use of flocculants.

Recommendations:

- 1) ENR recommends that Wekweèti specify if coagulants and flocculants will be used at any point during the duration of their current Water Licence (W2017L3-0001).
- 2) Should coagulants be used during the term of the Water Licence, ENR recommends that condition(s) be added to the Water Licence, as appropriate, via a Water Licence amendment, in order to adequately capture these operations.
- 3) Should Wekweèti re-iterate that no coagulants/flocculants will be used for the duration of the current Water Licence, details not yet removed in Part 1 & Part 2 of the WTP O&M Technical Manual referring to components, should be removed

to prevent regulatory inconsistencies as requested in the Board Reasons for Decision for the Gameti Water Licence (W2018L3-0001).

- 4) Finally, recommendations relating to management and monitoring best practices for backwash, wastewater and/or spent CIP, may require revisiting to consider GNWT/MVLWB collaborative work and Dalhousie University research findings and recommendations.

Topic 3: Water Treatment – Aeration Tanks vs. Flocculation Tanks

Comment(s):

While reference to flocculation tanks have mainly been replaced by aeration tanks in the document, a few references to Floc tank remain (eg. Technical O&M Manual – Part 1 Figure 6.2, 6.2.2, Part 2 in p. 30, 30 and 34 of 37).

As well, although sections such as 5.1, 3.19.3 are referring to aeration tanks, the process described in these sections is still referring to the mixing of coagulants.

Recommendation(s):

- 1) ENR recommends that Wekweètì specify if the updated WTP Technical O&M Manual – Part 1 and Part 2 are referring to two different types of tanks (aeration tank and Floc tank), or if remaining references to the floc tank have not yet been removed to reflect the use of only one type of tank (i.e. the aeration tank).

Comments and recommendations were provided by ENR technical experts in the Water Management and Monitoring Division and the North Slave Region and were coordinated and collated by the Environmental Assessment and Monitoring Section (EAM), Environmental Stewardship and Climate Change Division. Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst email: patrick.clancy@gov.nt.ca.

Sincerely,



Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring Section
Environmental Stewardship and Climate Change Division
Department of Environment and Natural Resources
Government of the Northwest Territories