Memorandum to the Council of

Corporation of the Municipality of Temagami

Subject: Temagami North Lagoon UV Building – Post-Construction Issues and Flood Risk Update

Memo No: 2025-M-116

Date: May 08, 2025

Attachment: None

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Recommendation

BE IT RESOLVED THAT Council receives Memo 2025-M-116 as presented.

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1. Executive Summary

This report outlines unresolved technical and operational issues at the Temagami North Lagoon UV Disinfection Facility, identified during and after construction. These include low building elevation relative to known flood levels, missing components such as a gantry crane and alarm systems, and access-related safety concerns. In late April and early May 2025, rising Net Lake water levels posed an immediate flood risk to the facility, necessitating emergency mitigation efforts to prevent flooding of the UV Building. These incidents underscore the facility's current vulnerabilities.

The issues identified appear to result, in part, from a fragmented delivery model in which no single party held full project oversight. The design consultant (J.L. Richards & Associates Ltd.) and contract administrator (TULLOCH Engineering Inc.) were retained separately, with no centralized project management role assigned. This structure limited the Municipality's ability to monitor, coordinate, and proactively resolve issues during project delivery.

Going forward, it would be prudent to structure capital projects of this nature with clearly defined oversight roles from the outset. In particular, assigning dedicated project management to coordinate design, construction, and turnover phases can help ensure smoother execution and reduce the likelihood of unresolved deficiencies. While design expertise remains essential, approving consultant contracts without parallel oversight mechanisms may inadvertently limit the Municipality's ability to manage outcomes effectively.

2. Background

The UV upgrade was initiated to improve effluent quality in accordance with provincial regulations. The Municipality entered into direct contracts with the following professional service providers:

 J.L. Richards & Associates Ltd. (JLR) – retained for detailed design and limited field support

- TULLOCH Engineering Inc. retained for contract tendering and construction administration
- Pedersen Construction (2013) Inc. awarded the construction contract and acted as the general contractor

JLR declined to report to TULLOCH, and TULLOCH's role did not include project management or design validation. This arrangement resulted in a divided structure, where no single firm held responsibility for overall project integration and coordination.

3. Urgent Risk Update: Flood Monitoring and Response (Net Lake)

- On April 29, 2025, at approximately 4:30 PM, a site inspection at the Net Lake Dam confirmed water levels were only 8 inches from overtopping. At the time, three timbers had been removed from each side of the dam to allow maximum flow. Despite this, water was visibly splashing over the top.
- Continued rainfall and spring thaw caused the water level to rise by an additional 5.6 inches by May 1, 2025, leaving only 2.5 inches of freeboard.
- A follow-up site inspection at the UV Building confirmed that the water level had also risen by approximately 5 inches, verified using a painted measuring stick placed by staff.
- As a preventative measure, a sandbag berm was installed around the UV Building to prevent flooding. This berm created a low area where rainwater may accumulate.
- To manage this risk, a submersible pump was placed on standby to remove any pooling water as needed.
- Photos and videos were taken to document site conditions and are available upon request.
- Between May 1 and May 2, water levels briefly dropped by 2 inches, but further rainfall is expected to increase lake levels again within the following 48 hours.

 Ongoing monitoring of the dam and the UV Building site continues. Staff are advised to remain informed and be prepared to assist if necessary. Updates will be provided as conditions evolve.

4. Identified Deficiencies and Operational Issues

- 1. Low Building Elevation The building sits too close to flood levels, with recent events confirming its high vulnerability.
- 2. Rodent Intrusion Wildlife accessed the UV Building via unguarded effluent piping.
- 3. Bar Screen Lid Safety The solid lid prevents safe inspection before opening.
- 4. Overflow Transmitter Installed too low to detect overflow accurately.
- Missing Gantry Crane The UV bank removal device was omitted from design; procurement is in progress.
- 6. No High-Level Alarm Bar screen clogs frequently without an alarm system.

5. Project Turnover Status and Municipal Position

Project turnover has not yet been finalized. Several key systems remain unresolved. Discussions about cost recovery or additional charges should be postponed until outstanding issues are fully addressed. If the current delivery structure does not result in satisfactory completion, the Municipality will pursue all appropriate channels—including contractual remedies, legal recourse, and third-party review—as necessary to protect its interests and ensure the facility meets required performance and regulatory standards.

6. Conclusion

The UV Building at the Temagami North Lagoon is operational but remains incomplete, with several technical concerns still outstanding. While municipal staff have taken steps to manage

immediate risks, the broader situation reflects the challenges of segmented project delivery without unified oversight.

Experience from this project suggests that when design and construction proceed without integrated management, it becomes more difficult to identify and resolve issues early. As the Municipality continues to invest in infrastructure, adopting a project delivery model that includes dedicated project management from the outset is strongly advisable. While engineering design remains a critical input, approving consultant contracts without built-in oversight can hinder effective coordination, increase risk, and compromise project outcomes.