

Communication Update

To: Mayor and Members of City Council

Date: July 13, 2026

Subject/Report No.: Woodward Wastewater Treatment Plant - Effluent Compliance (HW2604)

Ward(s) Affected: City Wide

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Signature:



The purpose of this Communication Update is to inform Council of ongoing challenges in meeting compliance limits for the Woodward Avenue Wastewater Treatment Plant Effluent.

Summary

Since December 2025, the Woodward Avenue Wastewater Treatment Plant has been out of compliance with the Total Suspended Solids (TSS) limit for discharges to Red Hill Creek. Unexpected early degradation of the tertiary plant's filter media, coupled with colder temperatures, has caused the plant to exceed the TSS effluent limits set in the facility's Environmental Compliance Approval (ECA) during the 2025/2026 winter season.

Hamilton Water continues to work with consultants and the filter equipment supplier to determine solutions to address the early degradation of the filter media and to develop short and long-term measures to ensure regulatory compliance. While this work continues, Hamilton Water has procured new filter media to replace the degraded media. Installation is underway and will be completed in 2026.

Hamilton Water has initiated discussions with the Ministry of Environment, Conservation and Parks (Ministry) regarding the challenges and proposed interim actions. Further engagement with the Ministry is planned for Q3 2026 to explore opportunities for relief from compliance limits while work continues to address the issue.

Background

Commissioning of the new Tertiary Treatment Facility at the Woodward Wastewater Treatment Plant began in late October 2022 and was completed in the fall of 2024. With this milestone, new effluent compliance limits took effect, reflecting the facility's improved treatment capability. For TSS effluent quality, the monthly average compliance limit was reduced from 25 mg/L to 10 mg/L, and an annual limit of 6 mg/L was introduced.

Details

The filters performed well during the first 3 years of operation. In 2025, staff observed accelerated degradation of the filter media and increased solids concentrations across the Wastewater Treatment Plant processes. In December 2025, as temperatures began to drop, the Woodward Wastewater Treatment Plant struggled to meet the required final effluent TSS limit of 10 mg/L. The plant has remained out of compliance with this limit throughout the winter. As temperatures rose in spring, final effluent concentrations improved but remain above the effluent limit. The graph below shows the monthly TSS concentrations over the past year. Table 1 presents the actual data.

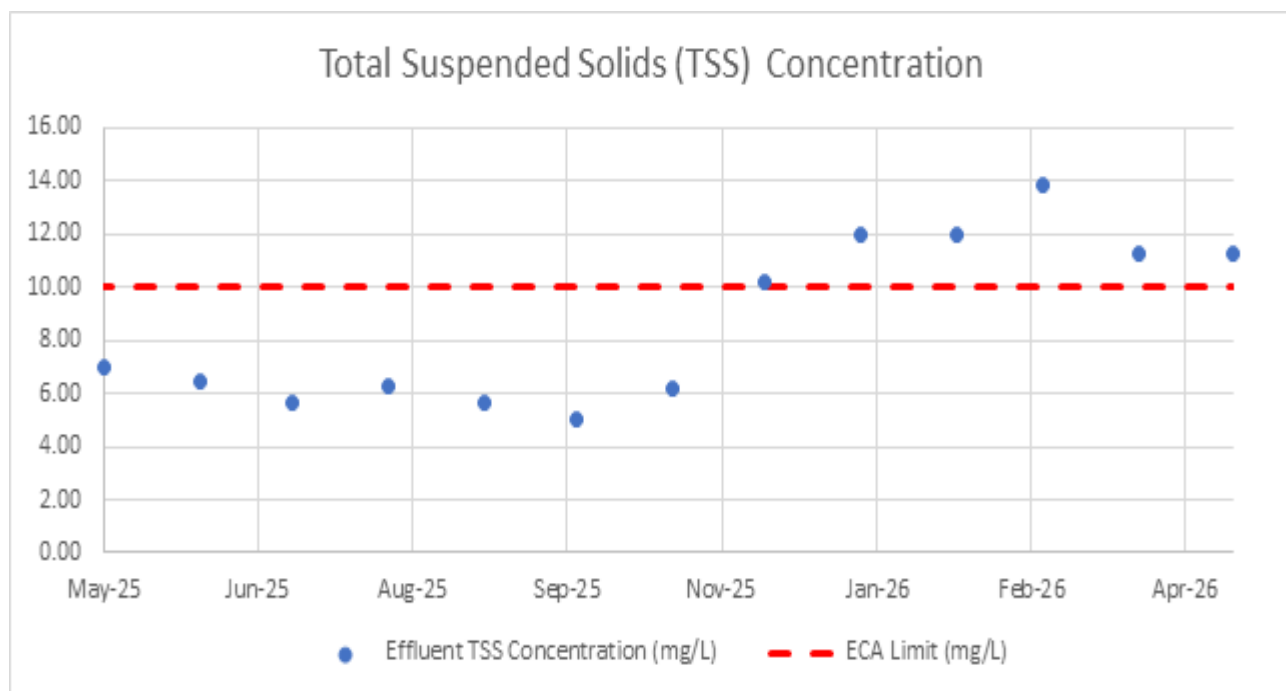


Table 1 - Total Suspended Solids Concentration mg/L per Month May 2025 - April 2026

Date	TSS Concentration (mg/L) – ECA Limit is 10 mg/L
April 2025	6.80
May 2025	7.00
June 2025	6.43
July 2025	5.67
August 2025	6.27
September 2025	5.70
October 2025	5.04
November 2025	6.20
December 2025	10.22
January 2026	11.97
February 2026	12.01
March 2026	13.82
April 2026	11.30
May 2026	11.26

The root cause of the increase in suspended solids remains uncertain; however, it is apparent that a contributing factor is the capture of small particles by the filters and their recirculation to the beginning of the Wastewater Treatment Plant, causing a buildup of solids within the plant. These higher solids loadings, in turn, are contributing to excessive wear and tear on the filter media.

New filter media has been procured to replace the degraded media. Installation began in May of this year. The installation will be complex and is expected to take several months to complete, as the facility must remain operational throughout the replacement activities. Final effluent quality is expected to improve during installation as individual filters are brought back into service with the new filter media. Compliance with final effluent limits is expected by the end of 2026.

Alongside the media replacement, work continues with the original tertiary facility design consultant to determine short- and long-term solutions for recycled suspended solids. Short-term solutions under review include chemical additions at various points in the treatment process to promote solid settling. Costs for any short-term solutions will be included in the 2027 operating budget submission.

Next Steps

Hamilton Water staff met with the Ministry on March 4, 2026, to provide an overview of the compliance challenges at the Woodward Wastewater Treatment Plant and to discuss the initial short-term measures underway. A follow-up meeting will be scheduled in Q3 2026 to present the investigation's preliminary findings and potential solutions, and to explore the possibility of receiving some form of relief from the TSS compliance limit until a permanent solution can be implemented.

Hamilton Water remains committed to transparency and to upholding the highest standards of environmental stewardship and regulatory compliance. Additional updates will be provided as this work progresses.

Appendices and Schedules Attached

None