

THE CORPORATION OF THE MUNICIPALITY OF MISSISSIPPI MILLS

STAFF REPORT

DATE: December 5, 2023
TO: Committee of the Whole
FROM: Cory Smith, Director of Public Works
SUBJECT: Wastewater Treatment Plant – Replacement of Turbo Blowers

RECOMMENDATION:

THAT the Committee of the Whole recommend council authorize the replacement of the turbo blowers at the Wastewater Treatment Plant (WWTP) by the Ontario Clean Water Agency (OCWA) in the amount of \$527,313.00 plus HST;

AND THAT the works be funded from Reserves;

AND THAT staff continue to include \$100,000.00 to reserves for the remaining budget years until 2026 as planned so that the reserves remain at the forecasted levels as per the Long Term Financial Plan.

BACKGROUND:

The Mississippi Mills Wastewater Treatment Plant (MMWWT) has experienced ongoing challenges with the Turbo Blower system since its commissioning in 2012. The current system, consisting of obsolete "K-Turbo" brand blowers, has faced recurring failures and a lack of Original Equipment Manufacturer (OEM) support. The need for replacement was initially planned for 2026, with \$100,000 per year allocated to reserves since 2021.

Early in its life cycle, the system required repairs, prompting a visit from a K-Turbo representative from Korea. Unfortunately, this visit marked the last instance of obtaining official Original Equipment Manufacturer (OEM) support. Despite subsequent efforts to address issues, including attempts to have the control boards repaired by an electronics repair shop, initial successes were short-lived, with recurring failures.

The Blower problem has been an issue for some time with one of the three blowers out of service for some time. A recent unforeseen failure of a second blower has left the plant with only one of the three blowers in operation and no redundancy. Attempts to work with the manufacturer to repair the blowers has not been successful. This serviceability issues with the existing blowers and lack of redundancy for the plant has accelerated the requirement for immediate replacement.

DISCUSSION:

Staff have worked with OCWA, in collaboration with EVB Engineering, and conducted a thorough assessment and provided a comprehensive review of options. The assessment included a review of different options in pump technologies and an in-depth assessment to assure appropriate sizing of the new blowers for both present and future requirements.

Based on the assessment, Blower equipment submittals were solicited from four (4) blower suppliers. Each supplier provided submittals for blowers that met the requirements as per the assessment criteria.

After considering various technologies, OCWA recommends proceeding with APG Neuros due to factors such as design capacity, application suitability, vendor reputation, maintenance support, cost, and schedule.

The cost of the APG Neuros is not the cheapest, other options reviewed for equipment solely were cheaper. With prices ranging from \$299,910.00 Plus HST to \$410,000.00 plus HST. for supply of the equipment only, APG is on the high end of the pricing. APG Neuros is the predominant blower used across the province in OCWA facilities. APG Neuros has proven to be reliable and responsive to service needs. OEM service support and parts are based out of Ottawa. OCWA has a standing agreement with APG Neuros to allow sole source preselection procurement which will save 6-8 weeks in delivery time.

Procurement for maintenance and capital for the Waste Water Treatment Plant is done under OCWA's procurement policy, as per the Municipal Agreement with OCWA.

OPTIONS:

1. Based on OCWA's recommendation Proceed with APG Neuros option which meets all the criteria's
2. Direct OCWA to complete additional review of the lower cost alternatives. It should be noted that two of the alternatives met minimum criteria but had sub-optimal design criteria.

FINANCIAL IMPLICATIONS:

A breakdown of cost estimate for the project provided from OCWA is included in the table below.

Item	Value excluding HST
APG Neuros Proposal	\$410,250.00
Mechanical Installation	* \$40,000.00
Controls integration	\$5,000.00
Project Subtotal	\$455,250.00
OCWA Contract Fee	\$25,763.00
OCWA Labour	\$1,300.00

Contingency	\$45,000.00
Total Amount	\$527,313.00

The total project cost from OCWA is \$482,313.00 plus HST, a 10% contingency of \$45,000.00 will be funded from the sewer and water reserves that have been dedicated to the blower replacement, with additional unfunded costs being funded from the general funds for the sewer and water reserves.

Staff should continue to include \$100,000.00 transferred to reserves for the remaining budget years until 2026 as planned so that the reserves remain at the forecasted levels as per the Long Term Financial Plan.

STRATEGIC PLAN

This recommendation aligns with the pillars of the municipality's strategic plan:

Safe and Sustainable: Ensures efficient wastewater treatment.

Modern Efficient and Effective Municipal Operations: Upgrades outdated equipment for improved operations.

Sustainable Financial Stewardship: Utilizes existing reserves for planned infrastructure improvements.

PUBLIC ENGAGEMENT

No specific public engagement is required for this report as it pertains to the replacement of critical infrastructure components.

SUMMARY:

The Mississippi Mills Wastewater Treatment Plant faces urgent challenges with the Turbo Blower system. OCWA recommends replacing the blowers with APG Neuros, aligning with the strategic plan for safe, sustainable, and efficient municipal operations. The total project cost is \$527,313.00 plus HST, to be funded from sewer and water reserves.

Respectfully submitted by,

Cory Smith,
Director of Public Works

Reviewed by:

Ken Kelly,
CAO

ATTACHMENTS:

1. OCWA Memo Re: Wastewater Treatment – Blower Replacements