



Meeting Date: January 29, 2025

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Report No: PWE 02-2025

Subject: Award of the Melrose Drinking Water Interconnect Project

Recommendation:

THAT Report PWE 02-2025, re: Melrose Drinking Water Interconnect Project award be received;

AND THAT the construction project to complete the upgrades and connection of the Melrose Drinking Water System to the Lake Huron Primary Water Supply System be awarded to Birnam Excavating Limited in the amount of \$3,292,876.27 (exclusive of HST);

AND THAT the Contract Administration and site inspection services for the upgrades to the Melrose Drinking Water System be awarded to Stantec Consulting Ltd in the amount of \$ 429,115.39 (exclusive of HST)

AND FURTHER THAT the Mayor and Clerk be authorized to execute the necessary contract documents.

Purpose:

This report seeks to inform and request the approval of the Municipal Council to retain a construction company and consulting engineering company to undertake the upgrades in accordance with the specifications set out in the Request for Tender PWE-2024-03 package specifications.

Background:

The Melrose Water Treatment Plant was constructed in 1990 and has a capacity of 277 m³/day, based upon the maximum allowable water supply from the two drilled municipal water wells. The water treatment plant has pre-disinfection, an aeration system and three multimedia filters for iron removal, turbidity control and colour. Secondary disinfection is added and water is stored in an underground reservoir. Water is then pumped on demand to 65 residential units. Many components of the water plant are nearing the end of their useful life and require extensive maintenance or replacement. The raw water supply has a history of elevated sodium levels in its water supply.

The Municipality of Middlesex Centre completed a Schedule B Municipal Class Environmental Assessment (Stantec, 2017), along with a number of background studies and reports identified a long-term solution for the water servicing for the Wynfield Gate Community in Melrose. The long-term solution identified the interconnection to the Regional Water Supply (RWS) secondary transmission main with retrofits to the Melrose Water Plant to convert the facility to a pumping station. The conversion to a water pumping station has significant advantages in terms of the integration and regionalization of the Municipality's infrastructure assets, reduces annual operating costs, addresses water quality and quantity issues including increased available storage for supply, and mitigates regulatory related impacts and the potential for significant drinking water threats associated with the Melrose Wellhead Protection Area (WHPA).

If the existing facility was to remain in operations the existing groundwater sources would be maintained but significant upgrades to the treatment facility would be required to address lifecycle issues, regulatory changes and level or treatment upgrades required as a result of the changes. Prior to any treatment equipment upgrades, consultation with the MECP would be required to address any changes in the regulatory requirements. The following provides a general summary of the key upgrades and estimated costs without consultation with MECP or engineering to modernize the facility.

Upgrade	Description of Required Works	Estimated Costs
Filter Media	Filters are at the end of their useful life and will require replacements.	\$275,000
Chemical Feed Panel	Chemical pumps and panel require replacement	\$76,250
Distribution System Pumps	Replacement of existing pumps and motors	\$51,288
Motor Control Center (MCC)	Replacement and upgrades and electrical at the end of their useful life and will require replacements.	\$297,850
SCADA System	Upgrades to SCADA at facility includes hardware, software and modifications within the PLC and alarms.	\$201,511
Back-up power generator	Generator is at the end of useful life and requires replacement	\$107,576
Total		\$1,009,475

If changes occur with the Ontario Drinking Water Standards (ODWS) and there is a requirement to increase the required removal/inactivation of virus in groundwater these changes would have impact on our disinfection requirements. The facility would still require the continuation of chlorination for primary treatment but we would also require an increase in contact time. The contact time can be increased by increasing the size of the clear well or installing an Ultraviolet Disinfection system. This would result in higher

capital costs (approximately \$200,000 to \$250,000 depending on flow, and UV transmittance) and increased operating costs. The interconnection to the regional water supply avoids these potential future costs as the source will no longer be groundwater.

The Environmental Services Department (through a contract with our engineering consultant, Stantec) completed the preliminary engineering design, detailed design and tender package that allows for upgrades to the water system, including the watermain interconnection to the Lake Huron Water Supply, plant process improvements, electrical, instrumentation and control, mechanical and structural upgrades to the Melrose facility. The project will convert the water treatment plant into a pump station.

Analysis:

The Request for Tender for the Melrose Drinking Water Interconnect Project closed on December 20th, 2024 with four (4) construction companies submitting tenders. As a minimum, the contractors were required to provide the completed Form of Tenders Schedule of Prices:

- Part 1 – Pumping Station and Appurtenances
- Part 2 – Road Work
- Part 3 – Storm Sewers and Appurtenances
- Part 4 – Watermain and Appurtenances
- Part 5 – Miscellaneous
- Part 6 – Linear Allowance
- Part 7 – Contingency
- Subcontractors
- Bonding

Municipal staff along with Stantec Consulting Ltd. reviewed and evaluated the schedule of prices, subcontractors and bonding documentations based upon pricing and considered the contractors' ability and relevant experience in directly relevant projects. The following contractors responded to the Tender.

Contractor	Tender Price (ex. HST)	Rank
Birnam Excavating Ltd.	\$3,292,876.27	1
K&L Construction	\$3,686,875.97	2
Hayman Construction Ltd.	\$3,927,000.00	3
Schouten Excavating	\$4,272,972.56	4

Staff are recommending the award of Melrose Water System Upgrades be made to Birman Excavating Ltd. in the amount of \$3,292,876.27 (excluding HST), as this is the low bid provided, and furthermore Birnam was evaluated by staff and Stantec considering the contractors' ability and relevant experience.

Staff also recommend retaining Stantec Consulting Ltd. to provide construction administration and inspection services on behalf of the municipality during the construction and commissioning phase of this project. Staff and Stantec have come to

an agreed upon scope and budget for their services for the construction phase of the project. Staff believe that there are significant advantages to maintaining the same consultant through the life of the project. Staff recommend that Stantec be awarded the consulting contract for contract administration and inspection services in for the Melrose Water Supply Upgrades in the amount of \$429,115.39 (excluding HST) which includes \$30,000 of contingency within the contract. The contingency allowance of \$30,000 is for additional support outside the level of service noted in the Melrose and LHPWSS Interconnection & BPS Work Plan and Budget for Construction Phase Services proposal and will only be used upon the review and approval by municipal PWE staff. The proposed work plan is intended to address the requirements for construction review services including commissioning support and preparation of close-out documentation.

Financial Implications:

The Council approved capital budget for 2025 included \$2,620,922 for the construction fees and \$400,000 for the contract administration for the Melrose Lake Huron Primary Water Supply Connection project. This project is expected to extend into 2026 (about a 16 month work schedule) so a portion of this project was identified in the 5 year capital forecast which included \$600,000 for construction in 2026 and \$130,000 for consulting in 2026. These combined totals equate to an earmarked budget of \$3,220,922 for construction and \$530,000 for contract administration (this would include geotechnical inspections on top of Stantec's fees). The low tender construction bid exceeds the approved and earmarked budget for the project by approximately \$129,908.90 when the non-fundable HST portion is taken into account. Since this project spans two years there is no requirement to amend the 2025 capital budget, the adjustment can be made to the 2026 proposed capital budget should this project be approved.

Work on this project is anticipated to commence immediately upon award by Council.

The contractors fee for undertaking this work (including a contingency price of \$200,000) is **\$3,292,876.27 excluding HST** (\$3,350,830.89 including the non-recoverable portion of HST).

The consultants fee for undertaking this work is **\$429,115.39** (including a contingency of \$30,000) **excluding HST** (\$436,667.82 including the non-recoverable portion of HST).

As indicated in the 2025 Capital Budget, this project will be fully funded from the Water Reserve Fund.

Strategic Plan:

This matter aligns with following strategic priorities:

- Sustainable Infrastructure and Services
- Responsive Municipal Government

This project will ensure that the proper infrastructure and a safe reliable water source is

in place to service the residents within the Melrose Community.

Attachments:

None