

Date: Wednesday, March 12, 2025

Meeting Type: Committee of the Whole

From: Samantha Buchanan, Treasurer

Subject: Water Meter Replacement Project

Report#: COR2025-14

This document and its attachments are public and available in an accessible format upon request.

Recommendation

That staff be directed to negotiate a single source Meter Replacement Project with Neptune Technology Inc.; and

That following negotiations staff be directed to enter into an agreement for the Meter Replacement Project with an upset financial limit of \$704,000; and

That staff be directed to include an update to Council upon execution of the agreement, and prior to the start of any works in the Township which provides the final financial cost and estimated project timeline.

Background

In 2013 the Township switched to Neptune Technology Group for all water systems water meters. These water meters are an important part for our water systems as it is the meters which collect and report the water consumption for each household which is then invoiced back to the home. When the switch was made in 2013 it included the installation of the meter base and R900i registers.

The current R900i register transmits a short-range radio frequency signal that requires a staff member to drive throughout each water system and collect the meters reading before any water bills can be generated, this takes both staff time and resources. When a property connected to the water systems is sold, staff must also visit the property on the closing date to capture a final reading to ensure that both owners are invoiced correctly.

There is currently only an opportunity for remote access to meter consumption therefore, if a household is experiencing a water leak, the property owners potentially are not aware of the leak until they receive their next bimonthly water bill. At the time of

identifying a potential water leak staff are required to physically visit to perform a water data log, again taking staff time and resources.

Analysis

As part of the 2025 Budget Priorities, a Budget Request was prepared for [Water Meter Replacement](#). This request was included in the 2025 budget as passed by Council on January 15, 2025. Since the passing of the 2025 budget staff have met with representatives from Evans Supply Limited (ESL) and Neptune Technology Group (Neptune) to further discuss how meter technology and meter reading technologies have evolved since the meters were first installed. ESL is the approved distributor of Neptune's products in Ontario, and the Township has benefitted from the expertise and support from ESL staff since the meters were first installed.

Staff recommend that the existing base and reader be replaced with Neptune R900 cellular endpoint and MACH 10 Solid State Ultrasonic Water Meter. Neptune meters are widely used in this area and have an excellent reputation for their performance and for both their manufacturing and their technical support. The Township's, current meter reading technology and the interface with our billing system is Neptune technology. Adding a different manufacturer and meter product into our existing Neptune water meter system is not practical, economical nor recommend as major systems changes including hardware and software would be required. This would include meter reading technology and billing software changes (if they can be interfaced together) and would create a logistics nightmare for billing purposes, and further, would increase future meter replacement costs related to incompatible installation dimensions.

This project would result in approximately 1,027 units being replace between the East Linton, Shallow Lake and Oxenden water system. The replacement would be occurring approximately 8 years before the end of the estimated useful life of the meters and bases which were installed in 2013. Upon meter testing of some of these meters, it was revealed that a portion of the meters tested were registering lower water meter consumption than what was being utilized. This means that some meters were understating the water consumption and that the corresponding water revenue for that meter was being undercharged.

The new cellular endpoint meters have an internal datalogger that stores 90 days of hourly water consumption data, which can be downloaded into an excel spreadsheet where the consumption patterns, including continuous and intermittent leak indicators, can be displayed and analyzed, and the property owner can see when the leak started, and when the leak was repaired. There are approximately 30 households which have had the new meter and base installed and staff have already been able to use this technology when addressing high bill complaints for these properties.

Neptune would provide many additional services that need to be considered for this project which include:

- Record old meter reading and supply to the Township;
- Storage of the old meter for a specified period (in case of billing disputes). As the Township's meter testing results revealed that a portion of the meters tested were registering incorrectly; and
- A turn-key service whereby property owners contact Neptune's call centre to set up the meter exchange appointment and their installers are uniformed to improve public acceptance.

Although Neptune water meters can be purchased from many sources, by entering into an agreement with Neptune Technology Inc. and/or Evans Supply Limited for a turnkey water meter supply and installation, the Township would realize cost efficiencies by dealing directly with the manufacturer and/or distributor of the meters. Additionally, a tender process would not be truly competitive as our documents would specify that the water meters had to be Neptune products, and all bidders would have to purchase the meters from Evans Supply Limited, as they are the sole distributor of Neptune products in Ontario.

Financial Impact

The 2025 budget includes a budget project cost of \$704,000, which includes a 10% contingency on the work. The cost of this would be funded proportionately by each water system based on the number of connected users switched to the new meter. Neptune is completing similar work in a neighbouring municipality which may result in a reduce price to the Township by saving funds on project start-up and finishing, these savings are not determinable at this time.

Strategic Lenses

Diversity, Equity, Inclusion, and Belonging

The water meter replacement would allow for all water meters on the East Linton, Shallow Lake and Oxenden to host their household water consumption patterns for the stored period of 90 days. Staff recognize that the project does not include the Pottawatomi water system currently, pending water distribution discussions. Pending the outcome of the water distribution discussions staff may recommend in future budget years to switch this water system as well.

Truth and Reconciliation

No positive or negative impacts.

Climate Change

The water meter replacement would provide more accurate monitoring of the water consumption for our water systems, being able to determine the water loss rates for each system and potentially identify water leaks in the system.

Conclusion

In 2013, the Township switched to Neptune for all water system water meters. Since then, technology has improved to allow for more accurate water consumption reads. By entering into an agreement with Neptune and/or Evans Supply Limited the Township is able to receive a turn-key service whereby property owners can contact Neptune's call center to set up an appointment at their convenience. This project will include numerous communications to all applicable water system users.

Respectfully Submitted: Samantha Buchanan, Treasurer



Report Approval Details

Document Title:	Water Meter Replacement Sole Source.docx
Attachments:	
Final Approval Date:	Mar 4, 2025

This report and all of its attachments were approved and signed as outlined below:

Brittany Drury, Deputy CAO/Director of Corporate Services

Niall Loble, Chief Administrative Officer