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Meeting Date: December 5, 2019
File No.:



To: Chair and Members
Lambton Area Water Supply System Joint Board of Management

From: Clinton Harper
General Manager

Subject: Brooke-Alvinston Water Supply System Modifications

Recommendation

That the LAWSS Board receive this report as information.

Background:

The Municipality of Brooke-Alvinston is supplied potable water by LAWSS through a connection to the Watford Subsystem. In 2018 LAWSS supplied 85,913m³ at a rate of \$1.13/m³. To supply the town, Brooke-Alvinston operates a reservoir pumping station and elevated water tower. Potable water entering the Municipality from LAWSS first travels to the Municipality's reservoir pumping station. From the reservoir, water is pumped into the town's elevated storage. OCWA has been contracted by Brooke-Alvinston to operate the water system.

In addition to pumping and storage, the original purpose of the pumping station reservoir was to treat water from the Sydenham River. The plant commissioned in 1974 was capable of treating up to 150m³/day. Treated water would be stored in the reservoir and eventually pumped into the community's elevated storage. Due to the quality of the source water, an effort was made in the 2004 to tie the Municipal system into LAWSS. Once the connection to LAWSS was made, the Municipality de-commissioned the treatment components of the reservoir pumping facility and established their current operational process.

In July 2015, the Municipality hired MIG Engineering to complete system modeling to help the Municipality better understand the necessity of their existing water infrastructure. Among other things, the 2015 MIG Engineering report concluded that the supply via the Watford Subsystem was sufficient to allow for the decommissioning of the reservoir pumping station. The LAWSS system pressure is already capable of filling the Municipality's elevated storage under normal operating conditions. The MIG Report recommends that the water tower be retained for emergency preparedness and fire-fighting purposes.

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Comments:

In June 2019, LAWSS staff was approached by a municipal representative with the 2015 MIG Engineering Report. The representative requested that LAWSS enter into a conversation with Brooke-Alvinston aimed at allowing them to de-commission their pumping station reservoir. The request was based on the MIG Engineering report's findings and recommendations.

The modeling used by MIG Engineering in their 2015 report was based off of data provided by LAWSS to MIG Engineering in 2012 for the development of the original LAWSS Master Plan. The MIG Report was considered to be out of date by staff and an updated modeling report was requested.

Based on agreed upon scope and criteria, Brooke-Alvinston hired AECOM to re-evaluate the request based on the recently updated LAWSS model created by AECOM. AECOM concluded that under existing and future demand conditions for water serviceability can be achieved without the Alvinston pumping station reservoir. They further advised that to prevent the standpipe from overfilling, a flow/pressure control valve would need to be installed to regulate water levels in the standpipe.

Essentially, Brooke-Alvinston is requesting an operational relationship with LAWSS that resembles the operational relationship between LAWSS and the Town of Plympton-Wyoming. In the Town of Plympton-Wyoming, specialized valving is used to control the elevation of the tower.

Consultation:

AECOM, and OCWA-LAWSS and OCWA-Alvinston staff were consulted in the preparation of this report.

Financial Implications:

There are no financial implications to LAWSS. All costs associated with the modifications will be borne by Brooke-Alvinston.

The rate Brooke-Alvinston pays to LAWSS was reviewed in 2018 and is subject to annual CPI increases. Due to the non-impact of the modification to LAWSS, a review of this rate for possible increase is not being recommended. The pumping station reservoir costs Brooke-Alvinston approx. \$15,000-\$20,000 annually to operate.

This report was prepared by Clinton Harper, LAWSS General Manager

Attachment(s):