



Staff Report

Report To: Council Meeting
From: Magda Badura, CAO/Treasurer
Date: 2021-05-27
Subject: Water Distribution System Modeling Study

Recommendation:

That West Elgin Council hereby receives the report from M. Badura, CAO/Treasurer re: Water Distribution System Modelling Study and
That West Elgin Council hereby approves transfer from Ontario Invests – Improve Service Delivery & Efficiency Grant in the amount of \$30,000 for the purpose of obtaining water distribution system modeling study.

Purpose:

The purpose of the report is to receive council's approval on developing a model of the Municipality's overall water distribution network.

Background:

The water distribution system includes all parts of the water system past treatment. Typical components of the distribution system are storage tanks, pipes, valves, and hydrants.

The function of a water distribution system is to deliver water to all customers of the system in sufficient quantity for potable drinking water and fire protection purposes, at the appropriate pressure, with minimal loss, of safe and acceptable quality, and as economically as possible.

With the increasing residential growth and other possible future development, updates to the Asset Management plan and Official Plan, it is vital to know and understand our water distribution system. Our plan is to retain an engineering company to develop a model of the Municipality's overall water distribution network. This modelling system will provide a computer numeric simulation of the distribution network hydraulic performance and will be based on geographic information system (GIS) data, historic water consumption data, agreements for water supply, as well as operational data provided by the Municipality.

The main objective of this study is to:

- document the model set-up and the parameters used for validation of the model performance
- summarize of the observed operating conditions of the existing West Elgin water system,
- provide a projection of the model results under future demand scenarios.
- report hydraulic deficiencies within the system based on model review of existing and proposed future conditions,
- provide recommendations for upgrades as appropriate.

For our small water system to be sustainable, we have to have sound financial management to ensure funds are used effectively and efficiently and customers are not caught in financial surprises.

This study will help us to meet our objectives with the focus on priorities without compromising existing and future service.

Financial Implications:

Cost of the study will be covered by Ontario Invests – Improve Service Delivery & Efficiency.

Report Approval Details

Document Title:	Water Modeling Study - 2021-17-Administration Finance.docx
Attachments:	
Final Approval Date:	May 25, 2021

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

Jana Nethercott