



ERIE COUNTY WATER AUTHORITY

INTEROFFICE MEMORANDUM

December 5, 2018

To: Terrence D. McCracken, Secretary to the Authority

From: Leonard F. Kowalski, Senior Distribution Engineer

Subject: Contract OBG-013
Hydraulic Integrity – Reliability of Water Supply
And Alternative Sources Study
ECWA Project No. 201800136

The following material is attached:

- Blue Authorization Form for Risk Manager and Legal Department approval. The Blue Authorization Form is requesting Board Authorization to execute the attached Professional Service Contract.
- Professional Service Contract for the above referenced project.

This contract consists of the study of the Authority's distribution system and the ability of the system to provide desirable flows and pressures when critical components are out of service (i.e. transmission mains, treatment plants, pump stations, etc...). The study will also explore alternate sources of water.

The Authority uses WaterGems Version 10 and the model contains approximately 61,000 pipe segments. The overall distribution system contains approximately 3,500 miles of pipe.

The study will be broken into two phases, the first phase is the Water System Modeling phase and the tasks are listed below:

- a) Consultant will obtain a copy of the current hydraulic model and import current piping for the Village of Williamsville via a shapefile provided by the ECWA. The model will be set with proper elevations and demands consistent with other model entities. One meeting with Authority staff will be required.
- b) All pump stations and tanks will be updated with current elevation data provided by ECWA in spreadsheet format.
- c) Based on recent flow data from the ECWA, the model will be calibrated county-wide, adjusting Hazen-Williams coefficients for different pipe materials to obtain the best steady-state results. The number of calibration points will be determined during the modeling phase but is expected to be at least 20.

- d) Once modeling is complete, consultant will meet with ECWA to demonstrate and explain model changes, and provide the functional model back to ECWA with all shapefiles, references, and all other supporting documentation. A summary report identifying changes, including scenario/alternative additions, calibration runs, Hazen-Williams modifications, and other necessary data will be provided.

After the hydraulic model is fully functional, the Consultant and Authority will discuss what scenarios will be modeled and studied during the second phase of the project. The scope and fee for the second phase of the study will be negotiated and the Professional Services Contract will be modified by amendment. This two-phase process was identified in the Request for Proposal that was utilized to select the consultant.

LFK:jmf

Attachments

cc: R.Stoll

CONT-OBG-013-1801-011