

City of Defiance
2018 Water Distribution Modeling

REQUEST FOR QUALIFICATIONS
October 5, 2018

Purpose

The City of Defiance intends to contract for field testing, configuration, calibration and other professional services in connection with the 2018 Water Distribution Modeling Project identified below. This request invites qualified firms to submit statements of qualifications for accomplishment of the work described. Proposals shall be prepared and submitted in accordance with the requirements described in this Request for Qualifications (RFQ). Statements received after the deadline stated herein will not be considered. Any statement of qualification not including all requested information will be reason to deem a firm unqualified.

Project Background:

The project is located throughout the entire City of Defiance water service area, including master metering points for satellite systems served by the City. The City's water distribution system is a single pressure zone system consisting of high service pumps located at the Defiance WTP, approximately 185 miles of water mains ranging in size from 1" thru 20" and two (2) elevated storage tanks, serving a population of roughly 20,100 at an average daily demand of 3.8 MGD. The existing water mains include cast and ductile iron, asbestos-cement, PVC and concrete material types and are fully documented within the City's GIS System. The City also provides potable water to the satellite communities of Ayersville, Brunersburg and Christy Meadows. The high service pumps are controlled through a SCADA network, based upon the levels within the elevated storage tanks and remote pressure sensors within the system. The City is experiencing challenges in balancing the fill and draw cycles of its elevated storage tanks and water age issues in portions of the system.

A water distribution model created in WaterCAD was developed for the City in 2014. The proposed project will involve the conversion of the City's GIS shapefiles and prior WaterCAD model to WaterGEMS, including updates and recalibration to reflect the current system configuration. All mains within the City's distribution system shall be included within the updated water model. The purpose of this project is to identify and prioritize potential areas for water main replacement, optimize high service pumping strategies and overall operational and maintenance improvements to enhance water quality and reliability. Consideration should be given to maintaining or improving fire flows, where possible.

Scope of Services:

Services related to the 2018 Water Distribution Modeling Project shall include, but may not be limited to:

- Attend a project kick-off meeting.
- Data collection efforts, including coordination with City staff to obtain water consumption and maintenance records.
- Conversion of available GIS data and prior WaterCAD model to WaterGEMS.
- Develop an extended period simulation model.

- Coordinate with City staff to conduct C-factor and hydrant flow testing within the distribution system to enable calibration of the model pressures as per guidance recommended in AWWA M32 – Computer Modeling of Water Distribution System.
- Coordinate with City staff to obtain field sampling data for chlorine to be used as part of calibration and validation of water age modeling.
- Perform water age modeling to review areas of excessive water age and to assist with the development capital improvements or development of operational modifications.
- Host up to three (3) workshops with City officials to present results and discuss capital improvement ideas prior to final submittal of detailed report.
- Provide a detailed report, signed and sealed by an engineer registered in the State of Ohio, detailing the procedures and processes undertaken in developing the updated model, outlining the alternatives, findings, and recommendations and the electronic model itself.
- Provide on-site training of City staff for on-going maintenance, future updates and simulations within the model. The City will directly purchase a license of the WaterGEMS software for local use.

The City intends to use Local Water Funds to finance the project. A fully calibrated model and draft summary report shall be submitted to the City of Defiance Engineering Department for review within six (6) calendar months of authorization to proceed.

Additional information can be reviewed at the following link:

<https://www.dropbox.com/sh/2omyjyy6hqzhkf2/AADABSKXRX9211VzvuENM1Rba?dl=0>

Statement of Qualification Submission:

Responses to this RFQ must be received by the City of Defiance Engineer’s Office as follows:

Due Date:	Friday, October 26_, 2018
Time:	Prior to 3:00 p.m.
Deliver To:	Melinda K. Sprow, PE City of Defiance 631 Perry Street Defiance, Ohio 43512
Submittal: statement of	One (1) bound, one (1) unbound and one (1) pdf qualifications

During the qualification evaluation, the City reserves the right to request additional written information to assist in the evaluation.

Written responses to the City’s request for additional information shall be signed by the proposer, by an officer of the proposing firm, or by a designated agent empowered to bind the firm in a contract.

Upon receipt, the statement of qualifications shall become the property of the City of Defiance

for disposition or usage by the City at its discretion.

Content of Qualifications:

To standardize responses and simplify the comparison and evaluation of the responses, all statements must be organized in the manner set forth below, separated into sections, and appropriately labeled. All information and materials requested shall be provided in the proposal under a single cover. The proposal length shall be limited to a maximum of 15 single-sided pages plus a cover letter. The minimum font size shall be ten (10) point.

- a. **Business Organization.** The full name and address of the firm's organization and the branch office that will perform the services described herein shall be stated. The Principal-in-Charge of the branch office shall be identified. Include a statement regarding the history and resources of the firm such as year established, ownership, financial viability and major areas of expertise. A statement shall be included from the firm that to the best of its knowledge, there are no circumstances that shall cause a conflict of interest in performing services for the City of Defiance.
- b. **Technical Approach and Scope of Work.** The responding firm shall state its understanding of the project as outlined. The scope of the approach in rendering the services required, including the use of sub-consultants, shall be detailed.
- c. **Related Technical Experience and References.** Descriptions of a minimum of two (2) and a maximum of five (5) projects of similar size and nature shall be submitted along with the corresponding reference contacts. No representative project should be more than ten (10) years old. Projects should show hydraulic model calibration and the use of water age modeling and/or water quality modeling to develop capital improvements.
- d. **Project Staffing and Organization.** Provide a brief description of the staffing and availability to complete this project, emphasizing specialized skills available for this project. Identify key personnel who will provide the required services directly to the City under this request.
- e. **Timely Completion of the Project.** Discuss the consultant's current workload and their ability to complete the project in a timely manner to meet the City's current construction deadline.
- f. **Additional Information.** Provide any additional information regarding your firm's experience and capabilities that you feel would be important to the success of the project.

Required Qualifications:

The firm must be registered to conduct engineering design services within the State of Ohio.

Evaluation of Qualifications

The City of Defiance will evaluate responding firms and rank in order of their qualifications. Evaluation of the statements and ultimate selection of the firm is based on the following criteria:

- Business Organization (10 points)
- Technical Approach and Scope of Work (35 points)
- Related Technical Experience (25 points)
- Project Staffing and Organization (10 points)
- Timely Completion of the Project (10 points)

- Additional Information (10 points)

As required by Ohio Revised Code Section 153.65-71, responding firms will be evaluated and ranked in order of their qualifications. Following this evaluation, the City of Defiance may decide to conduct interviews and will subsequently enter into contract negotiations with the most highly qualified firm. The City will be represented at these interviews by the City Administrator, the City Engineer and other relevant City staff. Once the City and the consultant agree upon the scope of services, the consultant will develop a fee proposal for the City's consideration. If the fee proposal is agreeable, the two parties will enter into a contract. If the fee proposal is not acceptable, the two parties will attempt to agree on revisions to the scope of work and budget, and if agreeable enter into a contract for the project.

Limitations and Reservations

The City reserves the right to accept or reject any or all submittals received as a result of this request, or to cancel in part or in its entirety this Request for Qualifications if in the best interest of the City to do so.

Contact Person(s):

Any questions concerning the proposals should be directed to Melinda K. Sprow, PE, Defiance City Engineer, 631 Perry Street, Defiance, Ohio 43512, phone 419-784-2249, fax 419-784-5443, msprow@cityofdefiance.com.