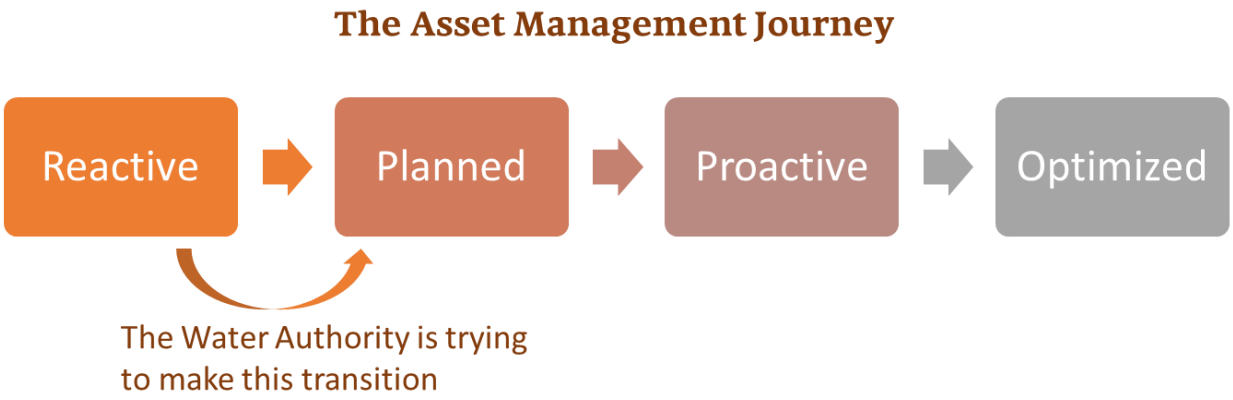
Request for Qualifications:
Asset Management Program Development

Released: August 31, 2022

Introduction

The Central Brown County Water Authority (CBCWA, the Authority), for its drinking water transmission system, is requesting Qualifications from qualified consultants or consulting teams (Consultants) to develop an asset management program plan and to deliver an asset management system that includes the digital support tools needed for the ongoing growth and implementation of the program and plan (the Project). This effort represents the Authority's first steps into asset management for its relatively new infrastructure, and thus has the initial focus of moving from reactive to planned interventions.



Addenda, Rejection, Cancellation, Preparation Cost

The Authority reserves the right to revise any part of this RFQ by issuing an addendum at any time prior to the submittal deadline. The Authority reserves the right to accept or reject, in whole or in part, all responses submitted and/or to cancel this announcement if any such action is determined to be in the Authority's best interest. All materials submitted in response to this RFQ become the property of the Authority. The Authority will not be responsible for Consultant costs associated with preparing responses. By submitting a proposal, each Consultant agrees to be bound in this respect and waives all claims regarding such costs and fees.

Description of the CBCWA and Its Infrastructure

The CBCWA

The Central Brown County Water Authority is a Joint Local Water Authority formed in accordance with Wisconsin State Statute 66.0823 and is the only such Authority in Wisconsin. The Authority is the wholesale provider of drinking water to seven of the communities in the greater Green Bay metropolitan area. These communities include its six charter Members: the City of De Pere, the Villages of Allouez, Bellevue and Howard, and the Towns of Lawrence and Ledgeview (Ledgeview Sanitary District No. 2). The Village of Denmark recently joined the Authority in 2022, becoming its seventh Member, and anticipates beginning water service in fall of 2023.

The Authority was created to develop, construct, and operate a communal water source and transmission system to bring water to its Member communities. Treated water is purchased from Manitowoc Public Utilities (MPU) and delivered to the Members through 65 miles of Authority-owned pipeline. Each Member owns and operates its own internal distribution system, and MPU owns the treatment plant that serves the Authority Members.

Construction began on the Authority's transmission main and related facilities in 2005, and water service began in 2007. A central water storage facility was added to the system with construction occurring in 2015 and 2016. At 15 years old, the transmission infrastructure is still relatively new, and the storage facilities are very new at 6 years. The Authority's asset management program must include all Authority-owned infrastructure.

Summary of Underground Assets

Primary components of the pipeline include 31 miles of 48-inch diameter transmission main from MPU in Manitowoc to the eastern edge of the Authority's service area in Ledgeview. A spoke system of 34 miles of additional mains further delivers water to each of the Member connection points, with the exception of Denmark, which will receive water directly from the 48-inch transmission main. The spoke system is composed of various pipe materials and diameters. The Authority's pipe sizes, materials, and appurtenances are summarized as follows:

- 48" pipe, 31.63 miles of steel and ductile iron
- 36" pipe, 8.22 miles of ductile iron and PCCP
- 30" pipe, 1.97 miles of PCCP
- 24" pipe, 12.73 miles of ductile iron
- 20" pipe, 2.92 miles of PVC and ductile iron
- 16" pipe, 3.94 miles of PVC and ductile iron
- 12" pipe, 3.48 miles of PVC
- 104 Air Release and Air Vacuum Valves
- 111 Transmission Main Valves
- 45 Blow-Offs
- 17 Locating Wire Stations
- 7 impressed current (cathodic protection) rectifiers

Summary of Vertical Assets

Along with the underground assets, the transmission system also includes various vertical assets. The four following facilities are owned by the Authority (with primary equipment listed):

- Master Meter Station (building, piping, metering equipment, pressure monitoring, chlorination equipment, SCADA components, network devices, HVAC)
- Central Storage (building, piping, 3 mgal standpipe, 8.5 mgal ground reservoir, pressure monitoring, 2 in-line pumps, emergency back-up generator and switch gear, flow control valves, SCADA components, network devices, HVAC)
- Pressure Reducing Station (underground vault, piping, pressure monitoring, flow control valves, SCADA components, network devices, HVAC)
- Howard Booster Station (building, piping, pressure monitoring, 3 vertical turbine pumps, emergency back-up generator and switch gear, flow control valves, SCADA components, network devices, HVAC)

The 2005-2007 construction also included eight connection stations which are now owned and maintained by the applicable Authority Members. A ninth station will be constructed in 2023 to serve the Village of Denmark. While these facilities are owned and maintained by the Members, the Authority retains responsibility for its own equipment within each Member connection station. This equipment generally includes piping, meters, control valves, SCADA components, network communication devices, and HVAC.

Cathodic Protection System

The Authority's transmission system was originally constructed without cathodic protection. In 2012, an active system was installed for the 48-inch main, and in 2020, active systems were also installed for the underground vault at the Pressure Reducing Station and for the underground pump barrel sleeves at the Howard Booster Station. Five of the impressed current rectifiers serve the 48-inch transmission main, and two rectifiers are associated with each of the Pressure Reducing Station and the Howard Booster Station. Primary equipment related to the cathodic protection system includes impressed current rectifiers, sacrificial anodes, locating/test stations, and network communication devices.

Snapshot of Condition Monitoring and History

Pipeline condition monitoring opportunities have been limited due to the critical nature (i.e., 24/7/365 operation) of the infrastructure. Physical limitations also impact access to the pipeline (i.e., lack of manways). To date, the following condition monitoring activities have been utilized:

- Sonic leak detection on 48-inch butterfly valves (every other year through 2018)
- Segment isolation and pressure testing (last conducted in June 2020)
- Pressure monitoring (ongoing)
- Cathodic protection system surveys of pipe-to-soil potentials, continuity, etc. (annually on steel mains, every two to three years on all other mains)
- Cell-to-cell corrosion potential survey for ductile iron segments (last conducted in July 2022)
- Vibration monitoring adjacent to a bridge replacement project (occurred in 2020)

Given the age of the Authority's infrastructure, break history is very limited. To date, two breaks have occurred, and upon investigation, were both determined to be caused by installation defects. These breaks occurred within the spoke distribution system; one on PVC pipe, and one on ductile iron pipe. No breaks have occurred on steel or PCCP. Two leaks caused by adjacent excavation/directional boring have also been repaired over the years.

Other potential issues and concerns have been identified over the years, especially relative to the 48-inch transmission main. Sinkholes have appeared and have been repaired in various locations (which are recorded in the Authority's GIS system) indicating issues with backfill materials and compaction. Other suspected issues associated with the original construction will be shared with the selected Consultant.

Project Vision and Goals

Implementation of the Water Authority's asset management program will result in a planned approach to water transmission system operation, maintenance, rehabilitation, and replacements that reduces the risk to its Members of costly disruptions to their water supply reliability. Of particular importance, the program will implement a proactive approach to managing the Water Authority's 48-inch transmission main, a critical asset for all the Members. Asset management tools adopted as part of this

approach are: 1) adaptable and expandable as additional data are gathered over time; and are 2) exemplary as they provide a model for the Members to consider following in managing their own local water distribution system assets.

Our goals for this asset management planning process include the following:

1. Get out ahead of costly and damaging "run to failure" scenarios.
2. Obtain the data and tools necessary to plan for financially responsible infrastructure replacements.
3. Deploy systems that allow refinement of useful life expectations/estimates as additional asset condition data are gathered.
4. Create a model that can be used to update the 10-year Capital Improvement Program and enhance the annual Preventive Maintenance Program plan.
5. Incorporate asset management results into the Water Authority's budget process and long-range financial model.
6. Secondarily, share processes, resources, or other benefits with the Water Authority Member utilities to assist them with their respective asset management journeys.

Scope of Services

A. <u>Consultant Services</u>

The selected Consultant will be responsible to provide the following services. Note that in several tasks, the Authority is also participating in completing the work scope with guidance and/or assistance from the Consultant.

1. Project Management and Communication
    a. In cooperation with the Authority, the Consultant will develop and manage a Project plan and approach. The Authority will work with the Consultant to refine and clarify the Project vision and goals as needed. The Project plan must then identify the steps to be taken to reach the Project vision and goals and must identify key tasks and milestones in the process.
    b. The Consultant will be responsible to understand how the Authority will define success for this Project and to manage execution of the project to successful completion.

2. Define Level of Service Expectations
    a. The Authority has identified a variety of potential system outage scenarios along with customer impacts. The Consultant will work with the Authority to understand and refine the potential water system outage scenarios and impacts.
    b. The Consultant will work with the Authority's stakeholders to understand their water service preferences and demands toward defining level of service expectations.
    c. The Consultant will synthesize the potential system outage scenarios and stakeholder input to define and document level of service expectations that are useful toward the asset management program.

3. Water System Inventory and Assessment
    a. The Authority has identified and mapped many of its assets in its GIS system. This includes all pipes, valves, and structures, but does not include any

constituent/smaller elements of these assets. Pipe materials and diameters are included in the existing inventory. Valve inspections and other preventive maintenance activities are included in the existing inventory.

b. The Consultant will provide guidance on the level of detail to be captured by the asset management system. (Define what is an "asset" that needs managing.) The Consultant will provide direction to the Authority to complete the inventory work to include all water system elements that meet this definition of an asset.
c. The Consultant will provide guidance and assistance to the Authority to assign asset data points: condition, age, service history, estimated useful life, adjusted useful life, remaining useful life, etc.
d. The Consultant will provide an asset management software tool for these purposes.

4. Risk Assessment and Management
   a. The Consultant will determine and assign risk assessment data points to the Authority's assets. This will include the computations and/or qualitative determinations, as appropriate, to identify at a minimum the probability of failure, the consequences of failure, and criticality of each asset.
   b. The Consultant will combine the risk assessment determinations to generate the business risk exposure for each asset.
   c. The Consultant will provide an asset management software tool for these purposes.

5. Intervention Plans
   a. The Consultant will provide recommendations for water system rehabilitation alternatives and replacement planning. The Authority understands that the depth of such recommendations depends on data completeness and can evolve as more data become available. This includes, but is not limited to, Consultant recommendations toward optimized interventions on the butterfly valves on the 48-inch transmission main.
   b. The Consultant will provide recommendations for risk reduction/mitigation planning. This includes interventions that can be implemented to further reduce risk to critical infrastructure. This also includes, but is not limited to, Consultant recommendations toward risk reduction/mitigation for the 48-inch transmission main.
   c. The Consultant will provide asset management software with the capability of providing analysis supporting rehabilitation and replacement expenditure decisions.

6. Financial Forecasts
   a. The Consultant will provide asset management planning outputs that inform the short- and long-term operation and maintenance strategy including the annual Preventive Maintenance Program.
   b. The Consultant will provide asset management planning outputs that inform the 10-year Capital Improvement Program and the long-range (20 to 30-year) financial model.
   c. The Consultant will provide an asset management software tool for these purposes.

7. Program Compliance
   a. Where applicable, the Consultant will provide Project work products and deliverables that meet the asset management planning requirements of the Wisconsin Department of Natural Resources Safe Drinking Water Loan Program.

b. Where applicable, the Consultant will provide Project work products and deliverables that meet the asset management planning requirements of federal funding sources related to America's Water Infrastructure Act (2018).
c. Note that there are no active or planned applications for a new Safe Drinking Water Fund loan or AWIA funds at this time. These would be future possibilities.

B. Authority Involvement

Consultants can expect that the following Authority stakeholders will be involved in the Project and in the roles identified as follows.

1. **CBCWA General Manager**. The General Manager will serve as the Project Manager for the Authority and will ensure that the Consultant has access to all Authority resources needed to complete the Project. He will facilitate participation by other Project stakeholders as needed. He will coordinate logistics for Project meetings including any required public notice or other Open Meetings Law requirements as applicable. In cooperation with the Consultant, he will assist with writing and assembling any reports needed to document the results of the Project.

2. **Manitowoc Public Utilities (MPU)**. MPU is the contracted provider of operation and maintenance services for the Authority's transmission system. Implementation of many asset management planning recommendations will require the cooperation of MPU staff, so the Authority will ensure that key individuals from MPU are involved in the Project.

3. **McMahon Associates**. McMahon is the Authority's contracted engineer. Their team's knowledge of the Authority's transmission system will be essential to creating an asset management plan. McMahon will be involved in every aspect of the Project but will be especially critical to complete the water system inventory and assessment work. McMahon also hosts the Authority's GIS system.

4. **CBCWA Technical Committee**. The Technical Committee is a standing committee of the Authority that oversees all operational aspects of the water system. The Committee is made up of Public Works and Water Utility staff from each of the Member communities. The Technical Committee will be kept informed of all aspects of the Project and will be of particular help in defining level of service expectations.

5. **CBCWA Board of Directors**. The Board of Directors is the governing body of the Authority providing all policy and financial oversight. The Board is made up of one appointed Director from each of the Member communities. The Board of Directors will be kept informed of all aspects of the Project, will be involved in helping to define level of service expectations, will need a good understanding of the financial forecasts and related assumptions, and will have the approval authority for all project deliverables.

Consultants can expect that the Authority will contribute the following resources and services to the Project:

1. Work already completed by McMahon under an existing study on potential system outage scenarios along with customer impacts
2. Data gathering toward the completion of the asset inventory to the level of detail and in the format(s) agreed upon in the course of the Project

3. Access to the Authority's GIS map of its transmission main and major components
4. Access to existing records of transmission main maintenance performed by MPU (these are not exhaustive records of all maintenance performed)
5. Access to existing reports related to infrastructure conditions and condition monitoring activities
6. Assistance from the Authority's General Manager with planning/process facilitation, stakeholder involvement, and report writing/report building
7. Availability of virtual meetings and related resources for use throughout the project as appropriate – the Authority is able to host virtual meetings for various size groups on various platforms (Zoom, Teams, Lifesize)

C. Project Budget and Timeline

Based on initial discussions with consulting firms, the Authority is anticipating a Project cost in the range of $25,000 to $30,000 for consulting fees and initial software fees. The anticipated timeline for Project completion is six months from initiation.

Consultant Selection

A. Process

The Authority will use the following process to select a Consultant for this Project.

1. **Review of Qualifications**. An initial selection of potential Consultants will be made based on their Statements of Qualifications. See the submittal requirements below for details.

2. **Consultant Interviews**. If after the review of qualifications, the Authority determines that interviews are needed to gain further information, interviews will be scheduled. The Authority may determine that interviews are not necessary and may elect to proceed directly to contract negotiation with the Consultant it finds is most qualified.

3. **Contract Negotiation**. Based on the steps above, the Authority may select a Consultant to enter into contract negotiation to formalize the scope of work, Project costs, and other obligations for execution of the Project. The Authority anticipates that this stage of the process will involve communication and cooperation with the Consultant to finalize the planning process and work plan. This stage will also involve the selected Consultant formulating a project cost proposal for review by the Authority. The Authority may end contract negotiation at any time at its sole discretion and reserves the right to select another qualified Consultant with which to begin contract negotiation.

B. Qualifications

Qualified Consultants will demonstrate expertise and a proven track record in delivering the following asset management services for drinking water transmission systems:

1. Project management and client communication
2. Defining level of service expectations
3. Collecting and interpreting data/analytics in support of client decision-making
4. Determining useful life expectations for assets
5. Completing risk assessments and critical asset identification
6. Delivering and supporting digital tracking/analysis systems (asset management software)
7. Implementing a variety of condition assessment alternatives

8. Selecting and implementing various asset interventions (replacement, rehabilitation, valve maintenance, sensor placement, transient monitoring, leak detection, pressure monitoring, etc.)

C. Evaluation Criteria
Evaluation of Consultant responses to this Request for Qualifications will serve as the basis for the Authority's selection of Consultant(s) to invite to interviews or of a Consultant to proceed to contract negotiation if interviews are not deemed necessary. Specifically, the following review criteria and weighting will be applied

1. **Project team** – (30%) including experience and capability toward the qualifications listed in Section B above, availability to do the work, resumes of the project team members, etc.
2. **Project understanding** (30%) – based on the appropriate fit of the Preliminary Process (see Submittal Requirements, Section D below), ability to collaborate with Authority resources, identify the needed deliverables, etc.
3. **Project support tools** (30%) – including the quality and appropriate scalability of the asset management software for our needs, ability to integrate with our existing GIS resource, cost, etc.
4. **Submittal quality** (10%) – including thoroughness, clarity, quality control, etc.

D. Selection Decisions
Review of Qualifications will be performed by the General Manager, and he may request the input of other stakeholders. The General Manager will provide recommendations to the CBCWA Technical Committee and Board of Directors. All Consultant selection decisions will be made by the CBCWA Board of Directors unless delegated to a Selection Committee. If interviews are conducted, a Selection Committee will be established for that purpose.

Submittal Requirements

Consultants are requested to provide three hard copies and one digital copy (in PDF format) on a USB drive of a Statement of Qualifications for the "CBCWA Asset Management Program Development Project" that includes all of the following elements.

A. Cover letter. In the cover letter, please address the Consultant's interest in the project and availability to take on the work.

B. Project Team. Identify the Consulting firm that will be responsible to complete the Project. Also identify any other partnering or subcontracting firms, if applicable. Please identify the Consulting team members that would work on this Project including the assigned Project Manager. Define each individual's team roles for this Project and provide each individual's resume or CV.

C. Qualifications. Please respond to each of the qualifications (items 1-8) identified in section B of "Consultant Selection" above. As applicable, provide responses that relate to the qualifications of the firm/team as a whole and/or to the qualifications of individual Project team members. Provide specific examples of comparable work which demonstrate the qualifications and ability of the Consultant to accomplish the Project goals. Provide a reference person with current contact information for each example of comparable work.

D. Proposed Process. With the understanding that this a preliminary proposal that can be refined if selected to proceed, provide a description of the process that would be proposed to complete the Project. Include the primary steps, general timeline, key milestones, and key deliverables. Explain the reasoning for the methods, tasks, and deliverables identified. Include any comments or suggestions on the scope of work, project budget, and project timeline that were presented in this RFQ.

E. Software Details. Please outline the function and capabilities of the proposed asset management software (or SAAS, as applicable) that would be included in the Project. Describe the software's capability to be accessed remotely and to allow for data input to occur by various stakeholders both inside and outside the CBCWA organization. Explain the ownership of the data, the ability to edit the data, and any limitations that the Consultant would place on the ability to edit the data. Include an explanation of the initial pricing and any ongoing fees related to the software or SAAS.

Schedule

A. Responses Due. Responses to this Request for Qualifications must be received by the Authority no later than **4:00 p.m. on Monday, October 10, 2022**. Evaluation of the responses by the Authority will be completed within 10 working days of the submittal deadline. Contacting references provided for examples of comparable work will also take place in this timeframe.

B. Interviews. If the Authority elects to conduct interviews, they will be scheduled with the Consultants selected for interviews to take place in October of 2022. The interview questions and evaluation criteria will be provided in advance of the scheduled interviews.

C. Contract Negotiation. A Consultant to enter into contract negotiation will then be selected with the anticipated Project start occurring in November of 2022.

Communications and Questions Regarding the RFQ

All questions regarding this RFQ can be directed to Nic Sparacio, CBCWA General Manager, at manager@cbcwa.com or by calling (920) 639-0078. Any responses to Consultant questions that provide additional information beyond that contained in this document, or that provide important clarifications to the information in this document, will be provided via email as an addendum to the RFQ.

RFQ Attachments

- Map of the CBCWA Transmission System