



**REQUEST FOR QUALIFICATIONS**  
for  
Arizona Municipal Water Users Association  
Water Loss Control Training & Technical Assistance Program

Due by 5:00 p.m. (PDT) July 17, 2019

### **Objective**

The Arizona Municipal Water Users Association (AMWUA) is seeking statements of qualifications for a consultant to provide a program that trains and assists its member water utilities in conducting water audits of their potable water distribution systems based on the American Water Works Association (AWWA) manual, M36 Water Audits and Loss Control Programs, Fourth Edition, Top-down approach. The objective of the program is to enhance existing water loss control efforts by equipping AMWUA member utilities with the knowledge, skills, and experience necessary to implement the M36 methodology, including its more advanced practices, beyond the duration of the program.

### **About AMWUA**

AMWUA is a 501(c)(4) nonprofit organization, founded in 1969. The organization consists of ten municipal water utilities in the Phoenix metropolitan area. AMWUA is staffed by eight, full-time employees with an annual budget of \$1.46 million. The ten member utilities range in size from the City of Goodyear, serving 48,000 residents, to the City of Phoenix, serving 1,650,000 residents. Cumulatively, AMWUA members serve over 3.5 million residents, roughly 51% of Arizona's population. The AMWUA organization's mission is to protect its members' ability to provide assured, safe, and sustainable water supplies to their communities. AMWUA staff works to advance the common interests of its member utilities. All members recognize the importance of efficiently tracking and delivering water and are interested in learning about and implementing industry best practices.

<b>Member Utility</b>	<b>Service Area Population (2017)</b>
Avondale	82,309
Chandler	253,098
Gilbert	247,542
Glendale	239,687
Goodyear	48,363
Mesa	472,453
Peoria	168,917
Phoenix	1,648,611
Scottsdale	235,620
Tempe	186,100

**Arizona Municipal Water Users Association**

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## **Project Scope**

Since the early 1980s, Arizona has required water providers in the most populated areas of the state to limit water loss referred to as lost and unaccounted for (L&U) water. All AMWUA members are considered large providers and are, therefore, required to limit potable L&U to under 10 percent annually or averaged over three years. All AMWUA members continue to meet and exceed Arizona's water loss control requirement. To meet the reporting requirements, all AMWUA members are familiar with basic system audits and have decades of experience tracking supply, consumption, and loss volumes. Members have kept L&U percentages in check by maintaining a focus on distribution system loss through leak detection, pipeline replacement, and meter repair and replacement.

Aging infrastructure, escalating costs, and drought impacts to water supplies are driving increasing focus on distribution system efficiency and water loss control. Arizona's current water loss requirement, while beneficial, has its issues. For example, a lack of systematic data validation, the current reporting requirements, and the percentage loss calculation can result in inconsistent results such as large negative percentages and significant fluctuations from year-to-year. Further, the raw L&U percentage does not provide any information on where losses are occurring or whether it is economical to address them. Arizona agencies and providers are now recognizing the need for a more detailed, systematic, and consistent approach to water loss control.

AMWUA's vision for the future is to employ utility resources to control water loss in the most economically efficient way possible. Members will use detailed, validated data collected through annual, industry standard, water loss audits. This data will allow the utilities to pinpoint areas of concern, track progress using key performance indicators (KPIs), and set economic-based targets. All utility departments will understand the benefit of the ongoing collection of validated data and be driven to implement more advanced validation measures as a fundamental component of efficient distribution system management. Their customers will be confident that they are delivering service in the most responsible, efficient way possible because they will be communicating their data driven efforts. Finally, utilities will be prepared and well situated to implement and comply with any new water loss requirement or regulation.

AMWUA members desire to build on their current water loss control auditing efforts using the industry recognized and approved best management practices of the M36 methodology to achieve their vision. All have varying levels of experience with the M36 methodology and therefore have different levels of need with respect to training and technical assistance. Some have had M36-based water audits completed before while others have never worked with the M36 water audit software. Due to this range of experience, the goals for this program, bulleted below, vary from introductory level to more advanced.

- All participants will know how to develop an effective internal water loss control team
- All participants will have completed a water balance including Level 1 data validation and have the necessary knowledge to accurately replicate the process in future years

- Participants will have the knowledge and basic experience necessary to begin implementing advanced data validation activities including supply meter verification, lag-time correction, billing database analytics, and meter performance analytics
- Participants will have reviewed tracking mechanisms and estimation procedures for identifying previously unknown sources of consumption e.g., billed/unbilled metered/unmetered consumption
- Participants will have the knowledge and basic experience necessary to determine economic levels of water loss and what sources of loss should be addressed first from a cost-benefit perspective
- At the conclusion of the program, all participants will have a plan, tailored to their situation, to move them closer to the vision outlined above

## **Project Requirements**

The following is a general description of what AMWUA expects from the contractor in creating and providing a Water Loss Control Training & Technical Assistance Program for its members. The scope of the Program will include three general stages lasting roughly one year in total with primary focus on the second and third stages. AMWUA staff anticipates that seven of its ten members will participate in the program, though that number may change.

- Management
  - The consultant will host and maintain an electronic means of sharing data, documentation, and report files (e.g., website, FTP, Dropbox) between the consultant and participating members
  - Results of each stage and final program outcomes will be reported and available electronically to AMWUA and member participants
  - An in-person meeting at the conclusion of the program is recommended, to present comprehensive results of Stages 1 – 3 to the members
  - The consultant will structure guidance to encourage participant-led data gathering and experiential learning
  - The consultant will guide participating members in engaging multiple departments across the utility
  - The consultant will provide direct support to the participants for data gathering. Once the data is gathered, the consultant will be responsible for a deeper analysis of the compiled data to provide expert recommendations on finding issues and to alleviate a heavy time burden on participants
  - A Final Report of the program will detail at minimum:
    - Training and technical assistance provided
    - Overall program outcome and major findings
    - Summary statistics of water loss components of participating utilities including data validation information

- Commentary on areas in need of most support, work, or assistance for each participating utility
  - Tailored recommendations for each utility on how to advance its water loss control efforts
  - Feedback from participants and participation statistics
  - Evaluation of the program and AMWUA programmatic recommendations for near-term and longer-term next steps
- Stage 1 [3 Months]
  - The consultant will conduct an initial orientation meeting(s) with AMWUA members either in-person or video web conference to initiate the first phase of data gathering. Information presented during the first meeting(s) will include but not be limited to:
    - AWWA M36 water loss audit methodology including steps to build a water balance and assign data validity grades
    - Establishing a cross-functional water loss control group or task force
    - How to access and use the AWWA Free Water Audit Software v5.0 (2014)
    - Data required to complete a water audit following the AWWA M36 *Top-down approach*
    - Free resources available to aid utility staff in completing a water audit
    - Data and documentation required to complete a Level 1 Water Audit Validation as detailed by the Water Research Foundation's "Level 1 Water Audit Validation: Guidance Manual" (2016)
  - It is anticipated that the data required for the Stage 1 water audit will be readily available based on the members' experience levels; the consultant will be available to the members as needed during the data gathering for all stages
  - Following the initial orientation meeting(s), the consultant will conduct one or more in-person workshops to address questions and issues members have as they complete their water balances and Level 1 water audit validation
  - Stage 1 will be considered complete when all actively participating members have successfully completed a replicable water balance and Level 1 water audit validation
- Stages 2 and 3 [6 - 9 Months]
  - Stage 2 will commence with a meeting either in-person or via webcast to initiate the second data gathering phase and focus on detailed apparent and real water loss profiling as well as advanced data validation efforts. This stage will include actions such as leakage component analysis, water meter billing analysis, and meter performance data analysis. This stage will also include instruction on industry standard key performance indicators and establishing baseline values.

- It is anticipated that the data required for the Stage 2 loss profiling and advanced validation may be less available and need more involvement from the consultant as the utilities are extracting and compiling
- The appropriate Stage 2 advanced validation activities will vary by water system, based on their existing practices, Stage 1 results, and total program budget availability
- Stage 2 water loss profiling will be necessary for all participating utilities
- Stage 3 will focus on the economics of water loss including how to calculate whether apparent or real losses are economic to recover given the cost of intervention i.e., determining the economic level of leakage. To determine an economic level of loss, the consultant will instruct participants in how to tabulate all costs for the utility to deliver one unit of water.
- The second data gathering effort will yield data needed to conduct both Stages 2 and 3
- Data analysis for Stages 2 and 3 will be conducted remotely by the consultant
- Consultant will also provide:
  - Input into the development of an optimized calendar/timeline to conduct the audit again the following year
  - Best management practices for communicating water loss audit processes and findings to executive management and the public

## **Project Budget**

The water loss control training and technical assistance program contemplated in this request for qualifications has a fixed budget not to exceed \$300,000. Funding is to be provided by a one-time grant from the Arizona Department of Water Resources' (ADWR) Water Management Assistance Program (WMAP), pending an intergovernmental agreement between AMWUA and ADWR.

## **Timeline**

### Tentative Schedule for the Solicitation Process

Description	Date
Advertisement	Mon, June 17, 2019
Last Day for Submittal Questions	Mon, July 1, 2019
Submittals Due to AMWUA	Wed, July 17, 2019
Finalist Interviews (if necessary)	Thu, August 1, 2019
Award	Fri, August 2, 2019
Contract Signed (pending AMWUA Board approval)	Thu, August 29, 2019
First Training Meeting Before	Fri, October 25, 2019

Please direct any submittal questions to:

Mr. Brett Fleck  
(602) 248-8482  
bfleck@amwua.org

## **Submittal Requirements**

Entities interested in providing the services AMWUA requests in this document should submit a Statement of Qualifications (SOQ) according to the requirements detailed in this section. If the submitting entity proposes to use any subcontractors, please also submit an SOQ for all subcontractors.

Proposals must be submitted electronically in PDF file format to Brett Fleck at [bfleck@amwua.org](mailto:bfleck@amwua.org) no later than 5:00 p.m. PDT time on Wednesday, July 17, 2019.

The e-mail subject line should read: AMWUA Water Loss Control Program – Your Company Name SOQ – 07/12/19 [*← date of submission*]

Please organize your submission into the following numbered sections:

### **I. About your company**

- Contact information for your company and the project lead e.g., name, address, phone number, e-mail
- Brief business history and summary e.g., years in business, ownership structure, number of employees, what work the company is most known for (market niche), services provided, strengths, etc.

### **II. About the project team**

- Please note all individuals who will materially contribute to the proposal and include the following for each:
  - Job title, phone number, and e-mail
  - Years of experience in the subject matter, years of experience with the company
  - Major task(s) he or she will be responsible for and any associated technical skills and certifications
  - Experience in the proposed role e.g., project manager, instructor
  - Key qualifications including experience with the AWWA M36 methodology and free audit software
  - Estimate of contribution to overall project work and hourly rate e.g., employee A will contribute ~50 hours of work, employee B will contribute 30 hours of work
- Please also include an organization chart of those involved in the project

### **III. Program proposal**

- Provide a detailed description of your approach to fulfilling the Scope of Services. Please include a proposed payment schedule and the number of hours per major task. Proposed phases, milestones, deliverables, and outcomes for each stage will be looked at favorably
- Detail what steps you will take to ensure participants will be able to successfully build on each successive lesson, so they are able to benefit from the entire program (as opposed to getting stuck in the initial stages)
- Detail how you will communicate with participating utilities and how you will exchange data, documentation, and other program information
- Describe what steps you will take to ensure that participating utilities will be able to continue conducting water audits, data validations, and water loss intervention economic analyses independently after the program ends
- Please provide comments concerning any difficulties you foresee in fulfilling the tasks and/or objectives described in the scope and requirements section. Please include suggested alternatives for anything you disagree with or believe would be more beneficial
- Describe how your proposal or approach is unique compared to consultants competing for similar work e.g., what sets you apart. Is there anything about your proposal that your peers might disagree with e.g., any contrarian views?

### **IV. Relevant Project Experience**

- Describe the project you have completed that is closest to the requirements of this solicitation. How did it go? What would you have done differently?
- For each of the following activities, please provide examples of projects you have successfully completed:
  - AWWA M36-based technical assistance program
  - Advanced Validation assessment and training (e.g., Chapter 6 of the Water Research Foundation, “Level 1 Water Audit Validation: Guidance Manual” (2016))
  - Economic level of water loss analysis and training

### **V. References**

- Please include three references for whom your company provided services most relevant to this project. For each reference, please include the following:
  - Reference entity name
  - Current contact information
  - Project name
  - Start date and contract duration
  - Value of contract
  - Brief description of services provided

## **Selection Criteria**

All proposals will be distributed to the selection team at the same time and reviewed and scored individually. One or more meetings will be held between the selection team, depending on number and competitiveness of proposals, to compile scores and discuss the proposals. The proposal with the highest score will be selected and the consultant contacted to develop a project contract. If AMWUA and the selected consultant cannot agree on contract terms, AMWUA can select the next highest scoring proposal. All proposals will be scored based on the following criteria:

<b>Submission</b>		<b>20</b>
	Compliance with submittal requirements	
	Attention to detail, concision, and clarity	
<b>Approach</b>		<b>30</b>
	Proposal demonstrates an understanding of the desired outcomes beyond the scope of work and requirements	
	Proposal detail and thoroughness e.g., descriptions, milestones, deliverables, etc.	
<b>Experience</b>		<b>40</b>
	Quality, depth, and applicability of project team experience	
	Similarity to and outcomes of prior consultant projects	
	Quality of deliverables of similar projects	
<b>Cost</b>		<b>10</b>
	Reasonableness of proposed work budget and timeline	
	Overall price and cost per hour of service	
<b>Total Points</b>		<b>100</b>

## **RFQ Review Team**

Brett Fleck	Sr. Water Policy Analyst, AMWUA
Canyon Jorgensen	Water Resource Specialist, City of Phoenix
Carol Ward	Assistant Director, AMWUA
Einav Henenson	Area Director, Statewide AMAs, Arizona Department of Water Resources
Sara Konrad	Sr. Program Administrator, AZ Water Infrastructure Financing Authority
Stephen Rot	Water System Advisor, City of Scottsdale

Brett Fleck is the primary author and point of contact for this RFQ. He will be leading the consultant selection process with the aid of five water professionals experienced in water loss audit methods and technical assistance programs. Once a consultant has been selected, Carol Ward will be the project manager and primary point of contact for the consultant from contract development to accepting the final report.