REQUEST FOR QUOTES
for
Water Distribution System
Leak Detection Equipment

RFQ Release Date: January 22, 2018
Quote Due Date: February 5, 2018
Request for Quotes

Water Distribution System Leak Detection Equipment

I. Introduction

The Municipal Water District of Orange County (MWDOC) and its member agencies invite your firm to submit pricing quotes for the purchase of Water Distribution System Leak Detection and Pressure Logging Equipment. MWDOC, in partnership with the Orange County Water Loss Control Work Group, is seeking to purchase a variety of water distribution system leak detection equipment for use by MWDOC and retail water agencies throughout Orange County, California. The leak detection equipment will be purchased and maintained by MWDOC and made available to all 32 retail water agencies in Orange County on a lending library basis. The types of equipment we are planning to purchase include, but are not limited to Sounding Rods, Geophones, Ground Microphones, Leak Correlators, Leak Noise Loggers, and High-Frequency Pressure Loggers. Along with this equipment, we are also seeking classroom and field-based training on how to effectively use and maintain this equipment.

II. Background

The Water Distribution System Leak Detection Equipment Lending Library is a component of a broader regional Water Loss Control Program (Program) sponsored by MWDOC. This Program includes the establishment of the Orange County Water Loss Control Work Group and one-on-one Technical Assistance from a consultant, Water Systems Optimization, Inc. (WSO), which specializes in water loss control. MWDOC's Program goes beyond SB555 water balance and validation requirements. The Program is seeking to establish long-term water loss control programs for retail water agencies that are based on proven, yet cost effective, water loss control practices. To that end, the graphic below provides a five-year roadmap.
Many participating retail agencies have completed two validated AWWA-methodology water audits to assess distribution system losses. Many agencies are now in the process of digging deeper into water loss volumes and recovery strategies through sales meter accuracy testing and Component Analysis of Real Losses. An appreciation of the accuracy of the customer meter stock and an agency’s unique leakage profile is required for more informed water auditing and effective water loss control program design. These component analysis and meter accuracy testing efforts will lead to the development and implementation of a long-term, cost effective, water loss control program.

Looking ahead, MWDOC applied for and was awarded a Bureau of Reclamation grant to purchase a variety of distribution system leak detection equipment for use by retail water agencies in their long-term water loss control programs. This equipment will be used to pinpoint leaks in their distribution systems, document leakage discovery, estimate recovery of leakage volumes, and repair leaks to reduce real losses.

III. Description of Desired Equipment

The types of equipment that will be evaluated for purchase include, but are not limited to, Sounding Rods, Geophones, Ground Microphones, Leak Correlators, Leak Noise Loggers and High-Frequency Pressure Loggers. This pricing shall include equipment warranty, training, maintenance and calibration schedule, and technical support information provided by the manufacturers. The following provides a brief description of each of these types of equipment.

**Simple Leak Noise Probes (Sounding Rods)**

The fundamental instrument for leak noise surveys is an instrument that uses a probe that conveys sound to the user audibly or through a monitor or both. Today’s units convey to devices that have amplifiers, and they feature insulated headphones and filters to screen out selected frequencies. Many units have readout devices to provide a visual measure of the noise (and cover frequencies outside human hearing).

**Ground Microphones**

A variation of the probe is a ground microphone that is placed on a flat surface to carry sound without direct water system contact.

**Leak Noise Correlator**

The leak correlator is essentially a two-channel microprocessor that measures the time delay of a leak noise registered at two contact points on the water main. By obtaining leak sounds at two points on either side of a suspected leak, the correlator analyzes the leak sounds and, knowing main characteristics that are input by the operator, determines the exact location of the leak between the two sensors.

**Leak Noise Loggers**

Leak-noise loggers sense and record sounds emanating from water distribution system piping, allowing operators to analyze sounds to detect and pinpoint leaks. Some leak noise loggers have capabilities to integrate with leak correlators and are thereby able to gather sounds from multiple loggers and correlate to pinpoint leak locations.

**High-Frequency Pressure Loggers**

High-frequency pressure loggers provide for continuous monitoring and logging (minimum sample rate 250 milliseconds) of water distribution system pressure to identify transient pressure spikes. Pressure loggers must be “lift and shift” compatible to allow for removal from one area of the...
system to installation at another area of the distribution system.

V. Training

Retail water agencies in Orange County have varying levels of experience using leak detection equipment. A few agencies are well-versed in leak detection programs, as they have engaged in leak detection in the past. Others are less familiar with leak detection, and do not have leak detection equipment. A training program reflecting these levels of experience is needed to insure effective use of the leak detection equipment to be purchased. In-classroom, in-field, and ongoing training will be utilized. In-classroom and in-field trainings will include multiple retail water agencies at each training session. A minimum of four in-classroom and four in-field training sessions will be scheduled. On-going training will be in the form of one-on-one field training with the equipment manufacturer/distributor and the retail water agency. **Respondents to this Request for Quotes should include the costs associated with this training within their pricing quotes for the equipment.**

VI. Leak Detection Equipment Purchase Schedule

The anticipated project schedule is set forth below.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>DATE</th>
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<tbody>
<tr>
<td>Release of RFQ:</td>
<td>January 22, 2018</td>
</tr>
<tr>
<td>Quote Due Date:</td>
<td>February 5, 2018</td>
</tr>
<tr>
<td>Quote Review:</td>
<td>February 5 – February 16, 2018</td>
</tr>
<tr>
<td>Manufacturer/Distributor Interviews:</td>
<td>February 19 – March 5, 2018</td>
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<tr>
<td>(tentative, if needed)</td>
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<tr>
<td>Equipment Selection Committee Consideration:</td>
<td>April 2, 2018</td>
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<tr>
<td>Board Consideration:</td>
<td>April 18, 2018</td>
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<tr>
<td>Equipment Purchase:</td>
<td>May 1, 2018 – April 30, 2019</td>
</tr>
</tbody>
</table>

VI. Information to be Submitted

The proposal must be clear, organized, and fewer than 12 pages in length. Additionally, the proposal must demonstrate the qualifications and experience of your firm and the staff who will provide the leak detection equipment and training. The proposal must contain the following information at a minimum:

A. Make and Model: The firm shall provide the make and model for each device, including key features and functionality. This may include, but not be limited to, equipment brochures, cut-sheets, or specification documentation.

B. Equipment Warranty: The firm shall describe the equipment warranty and warranty options, if available. The minimum warranty period shall be 3-years, with an option to purchase an extended warranty.

C. Equipment Maintenance and Calibration: The firm shall provide an equipment maintenance and calibration schedule and fee schedule.

D. Training: The firm shall describe the specific experience and capabilities of the training technicians, along with the recommended training curriculum and training duration (# of hours) for each type
E. References: Include five client references that MWDOC may contact, preferably from Southern California, to seek input on the leak detection equipment and services your firm provided.

F. Pricing Quote: Exhibit A is the required format for submitting price quotes. This form will help facilitate price quote comparisons by equipment type and manufacturer.

G. Schedule: The firm shall provide a schedule for delivery of each type of equipment.

H. Conflict of Interest: The firm shall provide documentation that personal or organizational conflicts of interest prohibited by law do not exist.

VII. Selection Process and Other Instructions

A Selection Panel consisting of representatives from MWDOC, retail water agencies, and WSO, Inc. will review all received proposals and consider the following factors to select the leak detection equipment:

- Completeness and professionalism of proposal
- Cost of equipment
- Technical and training assistance
- Equipment warranty
- References

The Selection Panel will review all written proposals, considering the above factors, and may hold interviews with selected respondents. During the equipment selection process, the Selection Panel may contact either the recommended firm or a short list of firms to obtain additional information, and may contact recent clients. Interviews, if needed, will be scheduled to be held one week after receipt of the quotes.

Based upon this process, the Selection Panel will recommend a firm or firms to MWDOC’s Board of Directors for the equipment purchase. The selected firm(s) must be able to provide equipment immediately upon award or within the proposed schedule (per Section VI. G above) and must be able to maintain the required level of effort to perform the training on-schedule.

This Request for Quotes does not commit MWDOC to retain any equipment providers, to pay costs incurred in the preparation of proposals, or to proceed with the project. MWDOC reserves the right to reject any or all quotes and to negotiate with any qualified applicant.

MWDOC and retail water agencies may make such investigations as they deem necessary to determine the ability of the Respondent to provide the goods and/or service as specified, and the Respondent shall furnish to MWDOC, upon request, all such information and data for this purpose. MWDOC may discuss or negotiate with one or more firms prior to award to enable a recommendation to be made to MWDOC’s Committee and Board.

MWDOC reserves the right to reject any or all proposals, either separately or as a whole, and accept any proposal or portion of any proposal presented which it deems best suited to the interest of MWDOC and its retail water agencies, and is not bound to accept the lowest price.
The cost for developing the proposal is the sole responsibility of the Respondent. All proposals submitted become the property of MWDOC.

At the time of the opening of quotes, each Respondent shall be presumed to have read and be thoroughly familiar with the specifications and contract documents (including all Attachments).

Be advised that all information contained in quotes submitted in response to this solicitation may be subject to the California Public Records Act (Government Code Section 6250 et seq.).

Questions and clarifications during the proposal process should be directed to Joe Berg via e-mail at jberg@mwdoc.com. Additionally, quotes should also be submitted to Joe Berg via mail or physical delivery to:

Joe Berg  
Director of Water Use Efficiency

**Mailing Address:**  
P.O. Box 20895  
Fountain Valley, CA 92728

**Physical Address:**  
18700 Ward Street  
Fountain Valley, CA 92708
Exhibit A
Equipment Price Quote Form
(this form is required)

Firm Name: _______________________________________

Firm Contact Person: _______________________________________

Contact Phone: _______________________________________

Contact E-mail: _______________________________________

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Quantity (enter price per unit in each quantity category, excluding sales tax)</th>
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<tbody>
<tr>
<td></td>
<td>1 – 3 Units</td>
</tr>
<tr>
<td>Sounding Rod</td>
<td></td>
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<tr>
<td>Geophone</td>
<td></td>
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<tr>
<td>Ground Microphone</td>
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<tr>
<td>Leak Correlator</td>
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<td>Mobile Noise Logger</td>
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Notes (provide any clarification you deem necessary to improve our understanding of the price quote):