-Request For Proposal-

New Hampshire
Department of Environmental Services

July 1, 2009

Leak Detection Surveys at NH Community Water Systems

I. Introduction

The New Hampshire Department of Environmental Services (DES) is requesting proposals for leak detection surveys to be performed at twenty-seven New Hampshire water systems. The purpose of the surveys are to reduce water and revenue losses by assisting water systems with leak identification and location. Projects range in size from entire distribution systems to portions thereof with the total length of pipe to be surveyed spanning more than 600 miles.

II. Background

All leak detection projects will be funded through a set aside of the Drinking Water State Revolving Fund (DWSRF) through the American Recovery & Reinvestment Act (ARRA) of 2009. The ARRA requires 20% of the funds received for DWSRF to be spent on water and energy efficiency. In April of 2009, DES sent leak detection project solicitations to all New Hampshire community water systems serving less than 33,000 people. A general summary of the community water systems that responded requesting leak detection assistance may be found in the table below. The number of miles was derived based on estimates provided by the water systems and is intended for guidance only and should not be the sole determinant of contract price for each project.

WATER SYSTEM	PERCENT OF DISTRIBUTION	MILES PROPOSED	METALLIC MILES	NONMETAL MILES
AQUARION WATER COMPANY	100%	136.0	78.6	57.5
DOVER WATER DEPARTMENT	18%	28.0	28.0	0.0
EMERALD LAKE VILLAGE DISTRICT	100%	14.0	13.9	0.1
EXETER RIVER LANDING	100%	1.8	0.0	1.8
EXETER WATER DEPARTMENT	100%	50.0	15.0	35.0
GOFFSTOWN VILLAGE WATER PRECINCT	100%	26.0	18.2	7.8
GREENVILLE ESTATES	100%	2.5	0.0	2.5
GUNSTOCK ACRES VILLAGE DISTRICT	100%	15.0	9.0	6.0
KEENE WATER WORKS	100%	101.0	19.6	81.4
LAKE SHORE PARK	100%	3.0	0.0	3.0
LOWER BARTLETT WATER PRECINCT	30%	6.0	4.8	1.2
MERRIMACK VILLAGE DISTRICT	10%	18.0	4.0	14.0
MILFORD WATER DEPARTMENT	29%	15.0	13.5	1.5
MITTERSILL WATER DEPARTMENT	100%	2.5	2.4	0.1
NEWFIELDS VILLAGE WATER & SEWER	10%	1.0	0.0	1.0
NEWPORT WATER WORKS	33%	18.0	11.3	6.1
NORTH CONWAY WATER PRECINCT	20%	7.0	4.6	2.5
PILLSBURY LAKE WATER DISTRICT	30%	1.5	0.0	1.5
PORTSMOUTH WATER WORKS	23%	30.4	26.8	3.9
RAYMOND WATER DEPARTMENT	100%	15.0	7.5	7.5
ROSEBROOK WATER COMPANY	100%	13.0	11.7	1.3
RYE WATER DISTRICT	100%	38.0	38.0	0.0
SEABROOK WATER DEPARTMENT	62%	34.0	0.0	34.0
STEELE POND	100%	0.1	0.0	0.1
WHITE ROCK WATER COMPANY	100%	3.0	0.0	3.0
WINSTOCK CONDO ASSOCIATION	100%	1.5	0.0	1.5
WOODSVILLE WATER & LIGHT	10%	20.4	19.5	0.9
TOTAL		**601.7**	**326.4**	**275.2**

III. Scope of Work

The work will consist of performing acoustical listening surveys on the distribution systems of the water systems identified above. The surveys shall be conducted in accordance with "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999. Surveys must be performed in two phases: an initial screening of the area to identify suspect leaks followed by a pinpointing phase to locate a suspected leak. A detailed report of findings must be filed with DES and the water system at the conclusion of each survey. It will be the responsibility of the water system to repair any leaks found.

Task 1 - Initial Survey

The initial listening survey may be performed using various types of leak detection equipment including but not limited to: contact microphones, ground microphones, correlators, and data loggers (noise analyzers). The initial survey may be performed on contact points within the system provided that leak sounds travel the entire distance between contact points. If leak sounds may not be heard the entire distance between points as a result of pipe material, contact point spacing, equipment sensitivity, or any other factor, a ground microphone must be used to listen directly over the pipe at an appropriate interval.

Task 2 - Pinpointing Phase

A pinpointing phase shall be conducted to relisten to suspect sounds found during the initial listening survey in order to determine the leak location. The pinpointing phase is restricted to the use of correlators and/or ground microphones. In both instances an electronic pipe locator shall be used to determine pipe location and direction prior to pinpointing the leak. If correlators are used to identify the leak location, a ground microphone shall be used to confirm the correlator results.

Task 3 - Leak Report

The contractor shall be responsible for preparing a leak report at the conclusion of each survey. The report shall be submitted to DES and copied to the water system. At a minimum, the report shall include the following information:

- Number of suspected leaks discovered during initial survey
- Number of actual located leaks
- Location of each leak
- A description of each leak
- An estimate of the flow rate of each leak (in gallons per minute)
- The date the leak was pinpointed

IV. Proposal Format

The proposal should include the following information:

- A breakdown of the cost and time required to complete each of the twenty-seven projects
- A summary of the three most recently completed leak detection surveys for community water systems that have utilized the company's services including contact information
- A description of the technical qualifications and training received for each staff member that will be participating in the surveys
- A description of the equipment that the company will use to perform the surveys

V. Additional Information
All contractors are responsible for consulting with the individual water systems and/or reviewing DES files to ensure an accurate price is provided in the proposal(s). Most of the twenty-seven water systems included a distribution map with their request for funding. The maps are of varying quality but may be viewed by contacting DES (see below).

All water systems receiving assistance are required to work with the selected contractor to ensure successful implementation. However, the contractor should contact each water system to confirm the availability of water system staff to conduct the necessary work before and during the actual leak detection surveys.

A proposal is required for each of the twenty seven projects listed. Due to ARRA funding stipulations, work is required to be under contract no later than February 17, 2010 and needs to be completed no later than September 30, 2011. Although a proposal is required for all projects, multiple contracts may be awarded to complete the surveys if time and/or personnel constraints present a problem.

V. Evaluation Criteria
A selection committee consisting of DES representatives will be used to evaluate the submitted proposals based on the following criteria:

- Cost of projects 33.3%
- Time to complete 33.3%
- Experience 33.3%

VI. Proposal Submittal Date
Proposals should be submitted no later than September 1, 2009 to:

Derek Bennett
Drinking Water & Groundwater Bureau
New Hampshire Department of Environmental Services
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095

VII. Questions
All inquiries related to this request for proposal should be made to Derek Bennett who may be reached using the address above, by telephone (603) 271-6685, or by email derek.bennett@des.nh.gov

VIII. Attachments

- Project request submittal forms provided by the community water systems seeking assistance (27).
- Primary contact information for each of the applicants