

Meeting Date: 9/23/2014

Report Type: Consent

Report ID: 2014-00654

Title: Agreements: District Metered Areas Pilot Study for Water Loss Control

Location: Citywide

Recommendation: Pass a Resolution authorizing the City Manager or the City Manager's designee to 1) enter into a grant agreement with Sacramento Municipal Utility District; 2) authorize budgetary amendments for the Water Conservation Program (14120400); and 3) enter into a Professional Services Agreement with Water Systems Optimization, Inc. to provide professional services for a District Metered Areas Pilot Study for Water Loss Control.

Contact: Michael Malone, Operations Manager, (916) 808-6226; Julie Friedman, Program Specialist, (916) 808-7898, Department of Utilities

Presenter: None

Department: Department Of Utilities

Division: Operations & Maintenance Admin

Dept ID: 14001211

Attachments:

1-Description/Analysis

2-Background (DMA)

3-PSA Contract

4-CAT Contract

5-Resolution

City Attorney Review

Approved as to Form

Joe Robinson

9/17/2014 1:32:15 PM

Approvals/Acknowledgements

Department Director or Designee: Bill Busath - 9/15/2014 10:27:45 AM

Description/Analysis

Issue Detail: City, regional, and state-wide stakeholders have identified the importance of Water Loss Control Programs. The recently-adopted City Water Conservation Plan and the Department of Utilities (DOU) 5-year Strategic Plan call for intensifying the City's system-wide leak detection program to reduce water loss. This report requests authorization for two projects related to the reduction of water loss: (1) participation in Sacramento Municipal Utility District's (SMUD's) Customer Advanced Technologies Program to utilize funding awarded through the Regional Water and Energy Assessment Program, co-sponsored by SMUD and the Regional Water Authority, to demonstrate greenhouse gas emission reductions through energy and water savings; and (2) approval of an agreement with Water Systems Optimization, Inc. (WSO) to provide professional services for a District Metered Areas (DMAs) Pilot Study for Water Loss Control. DMAs are discrete areas of the water distribution system that have a defined boundary encompassing 500-5,000 metered service connections, and are set up to provide leak detection water savings assessment via isolation and installation of sub-meters on specific portions of the system which have existing residential meters with Advanced Metering Infrastructure (AMI) technology.

Policy Considerations: City Council approval is required for the establishment of operating grants where matching funds from City resources are required and for professional services agreements in amounts of \$100,000 or more. This action is in keeping with the City Water Conservation Plan adopted by City Council in October 2013, which recommended intensification of the system-wide leak detection program to help achieve the 20 percent per capita water use reduction by 2020 mandated by the 2009 Water Conservation Act. The project is also in keeping with the goal to ensure the infrastructure for a safe and reliable water supply, and is consistent with the City Council focus areas of public safety, economic development, and sustainability and livability. It corresponds with recommended best management practices (BMPs) based on the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding and the American Water Works Association (AWWA) Water Audits and Loss Control Programs.

Economic Impacts: None

Environmental Considerations: The Community Development Department, Environmental Planning Services has reviewed the project and has determined the project is exempt from California Environmental Quality Act (CEQA) review under CEQA Guidelines Section 15061(b)(3). The activity is covered by the general rule that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

Sustainability: The proposed project is consistent with the City's Sustainability Master Plan goal by enabling DOU to protect sources of water and provide a safe and reliable water supply for the Sacramento region.

Commission/Committee Action: Not applicable

Rationale for Recommendation:

The DOU Request for Qualifications (RFQ) #14141411020 was issued on May 20, 2014, and three firms submitted Statements of Qualifications (SOQs): Black & Veatch, Water Systems Optimization, Inc., and Psomas. The DOU selection panel evaluated the SOQs submitted and determined Water Systems Optimization, Inc. to be the top-ranked firm to provide these services.

The Water Operating budget and the grant agreement with SMUD provide funding for improvements to the City's water loss detection program.

Financial Considerations:

The proposed professional services agreement has a not to exceed amount of \$169,833 for two phases of service: Phase 1 will include selecting pilot study areas and implementation of a 1-year pilot study; Phase 2 will include reporting on results. The grant from SMUD's Customer Advanced Technologies Program Participation and Monitoring Agreement will utilize funding awarded through the Regional Water and Energy Assessment Program. By participating in this Agreement, the City will receive \$45,000 with a match requirement of \$45,000. The Water Conservation MYOP – I14120400 has sufficient Water funds (Fund 6005) for the City match. In addition, Water funds of \$90,000 will be transferred from the Water Distribution operations (Fund 6005) to this project to provide for sufficient resources to award the contract and complete the project.

Local Business Enterprise (LBE): Water Systems Optimization, the vendor recommended for award, has complied with the City's minimum five percent LBE participation level on this agreement.

Background

The City of Sacramento, Department of Utilities (DOU) provides drinking water and a means of fire suppression to approximately 140,000 connections and 450,000 people. The distribution system covers about a 100 square-mile service area and contains approximately 1,500 miles of pipe. With the Sacramento region expected to grow by 200,000 people in the next 20 years, the water supply will continue to become more critical due to increasing demands, challenges to the environmental health of the local rivers and the Sacramento-San Joaquin Bay Delta, and rapidly escalating costs of delivering a safe and reliable water supply to the community.

In 2013, the City adopted a Water Conversation Plan to meet the state mandate to achieve 20 percent water use reduction by 2020. The Water Loss Program was identified in the plan and is being accelerated to help meet the 20 percent by 2020 goal.

In 2012-2013, the Operations and Maintenance Division (O&M) initiated an in-house acoustic leak survey and repair program as part of a short to medium-term water loss reduction program, including a leak detection crew with active monitoring and leak repair focused on the older mains in the downtown City area. The 2-person crew provided sonic leak detection surveys to pinpoint the location of a leak. Within six months, approximately 120 leaks had been identified and repaired and more than two million gallons of water was saved during that time. With the continuing drought conditions, O&M augmented the program and added an additional 2-person crew in 2014.

As the next step for a medium to long-term water loss reduction strategy, the DOU is developing a District Metered Area (DMA) Pilot Study for Water Loss Control in FY15-16. To assist in this effort, a DOU Request for Qualifications (RFQ #14141411020) was issued on May 20, 2014. Three firms submitted their Statement of Qualifications (SOQs) in accordance with the requirements of the RFQ: Black & Veatch, Water Systems Optimization, Inc. and Psomas. The SOQs were evaluated and ranked by a 5-member panel and Water Systems Optimization Inc. was selected as the most qualified firm.

DMA management is a relatively new tool in the United States that helps to identify areas where real losses are occurring. A DMA is a discrete area of the water distribution system that has a defined boundary encompassing between 500-5,000 metered service connections with flow meters installed at strategic entry points. DMA management performs a water balance by comparing the flow meter data with the consumption data from the billing system to quantify Non Revenue Water (NRW). The advantages of DMA management are smaller, more manageable areas, more focused active leakage detection efforts, quicker identification of leaks based on night flow monitoring, and shorter run time of leaks. Currently, the DOU estimates water losses in the range of an average of 135 gallons/connection/day across the distribution

network. By implementing the proposed pilot project, the volume of real losses could be reduced by about 50 percent or approximately 68 gallons/connection/day.

Based on this pilot program, DOU will evaluate DMA management as a tool to determine which parts of the distribution system are experiencing the highest level of leakage and determine areas that have limited leakage, so that resources can be targeted to the greatest effect. The one-year Pilot Program will begin implementation by the end of September 2014; phase 1 will be completed by the end of March 2015, and phase 2 will be completed by the end of September 2015.

The grant from Sacramento Municipal Utility District's (SMUD's) Customer Advanced Technologies Program will utilize funding awarded through the Regional Water and Energy Assessment Program co-sponsored by SMUD and the Regional Water Authority (RWA). By participating in this Agreement, the City will receive \$45,000 of the \$125,000 of funds awarded to RWA and demonstrate greenhouse gas emission reductions through energy and water savings.

PROJECT #:
PROJECT NAME: District Metered Area (DMA) Pilot Study for Water Loss Control
DEPARTMENT: Utilities
DIVISION: Operations & Maintenance

CITY OF SACRAMENTO

**PROFESSIONAL SERVICES AGREEMENT
FOR ARCHITECTS, LANDSCAPE
ARCHITECTS, PROFESSIONAL ENGINEERS,
AND PROFESSIONAL LAND SURVEYORS**

THIS AGREEMENT is made at Sacramento, California, as of _____, by and between the **CITY OF SACRAMENTO**, a municipal corporation ("CITY"), and

*Water Systems Optimization, Inc.
290 Division Street, Suite 311, San Francisco, CA 94103
Phone: (415) 538-8641 Fax: (814) 286-1556*

("CONTRACTOR"), who agree as follows:

- Services.** Subject to the terms and conditions set forth in this Agreement, CONTRACTOR shall provide to CITY the services described in Exhibit A. CONTRACTOR shall provide said services at the time, place, and in the manner specified in Exhibit A. CONTRACTOR shall not be compensated for services outside the scope of Exhibit A unless prior to the commencement of such services: (a) CONTRACTOR notifies CITY and CITY agrees that such services are outside the scope of Exhibit A; (b) CONTRACTOR estimates the additional compensation required for these additional services; and (c) CITY, after notice, approves in writing a Supplemental Agreement specifying the additional services and amount of compensation therefor. CITY shall have no obligations whatsoever under this Agreement and/or any Supplemental Agreement, unless and until this Agreement or any Supplemental Agreement is approved by the Sacramento City Manager or the City Manager's authorized designee, or by the Sacramento City Council, as required by the Sacramento City Code.
- Payment.** CITY shall pay CONTRACTOR for services rendered pursuant to this Agreement at the times and in the manner set forth in Exhibit B. The payments specified in Exhibit B shall be the only payments to be made to CONTRACTOR for the services rendered pursuant to this Agreement unless pursuant to Section 1, above, CITY approves additional compensation for additional services. CONTRACTOR shall submit all billings for said services to CITY in the manner specified in Exhibit B, or, if not specified in Exhibit B, according to the usual and customary procedures and practices that CONTRACTOR uses for billing clients similar to CITY.
- Facilities and Equipment.** Except as set forth in Exhibit C, CONTRACTOR shall, at its sole cost and expense, furnish all facilities and equipment that may be required for furnishing services pursuant to this Agreement. CITY shall furnish to CONTRACTOR only the facilities and equipment listed in Exhibit C according to any terms and conditions set forth in Exhibit C.
- General Provisions.** The General Provisions set forth in Exhibit D, that include indemnity and insurance requirements, are part of this Agreement. In the event of any conflict between the General Provisions and any terms or conditions of any document prepared or provided by CONTRACTOR and made a part of

this Agreement, including without limitation any document relating to the scope of services or payment therefor, the General Provisions shall control over said terms or conditions.

5. **Non-Discrimination in Employee Benefits.** This Agreement is subject to the provisions of Sacramento City Code Chapter 3.54, Non-Discrimination in Employee Benefits by City Contractors. The requirements of Sacramento City Code Chapter 3.54 are summarized in Exhibit E. CONTRACTOR is required to sign the attached Declaration of Compliance (Equal Benefits Ordinance), to assure compliance with these requirements.
6. **Authority.** The person signing this Agreement for CONTRACTOR hereby represents and warrants that he/she is fully authorized to sign this Agreement on behalf of CONTRACTOR and to bind CONTRACTOR to the performance of its obligations hereunder.
7. **Exhibits.** All exhibits referred to herein are attached hereto and are by this reference incorporated as if set forth fully herein.

Executed as of the day and year first above stated.

CITY OF SACRAMENTO
A Municipal Corporation

By: _____

Print name: _____

Title: Department of Utilities Director

For: John F. Shirey, City Manager

APPROVED TO AS FORM:

City Attorney

ATTEST:

City Clerk

Attachments

- Exhibit A - Scope of Service
- Exhibit B - Fee Schedule/Manner of Payment
- Exhibit C - Facilities/Equipment Provided
- Exhibit D - General Provisions
- Exhibit E - Non-Discrimination in Employee Benefits

CONTRACTOR:

Water Systems Optimization, Inc. _____

NAME OF FIRM

Federal I.D. No.

State I.D. No.

City of Sacramento Business Op. Tax Cert. No.

TYPE OF BUSINESS ENTITY (*check one*):

- _____ Individual/Sole Proprietor
- _____ Partnership
- _____ Corporation (*may require 2 signatures*)
- _____ Limited Liability Company
- _____ Other (*please specify:* _____)

Signature of Authorized Person

Print Name and Title

Additional Signature (*if required*)

Print Name and Title

DECLARATION OF COMPLIANCE
Equal Benefits Ordinance

Name of Contractor: Water Systems Optimization, Inc.

Address: 290 Division Street, Suite 311, San Francisco, CA 94103

The above named Contractor ("Contractor") hereby declares and agrees as follows:

1. Contractor has read and understands the Requirements of the Non-Discrimination In Employee Benefits Code (the "Requirements") attached hereto as Exhibit E.
2. As a condition of receiving this Agreement, Contractor agrees to fully comply with the Requirements, as well as any additional requirements that may be specified in the City of Sacramento's Non-Discrimination In Employee Benefits Code codified at Chapter 3.54 of the Sacramento City Code (the "Ordinance").
3. Contractor understands, to the extent that such benefits are not preempted or prohibited by federal or state law, employee benefits covered by the Ordinance are any of the following:
 - a. Bereavement Leave
 - b. Disability, life, and other types of insurance
 - c. Family medical leave
 - d. Health benefits
 - e. Membership or membership discounts
 - f. Moving expenses
 - g. Pension and retirement benefits
 - h. Vacation
 - i. Travel benefits
 - j. Any other benefit offered to employees

Contractor agrees that if Contractor offers any of the above-listed employee benefits, Contractor will offer those benefits, without discrimination between employees with spouses and employees with domestic partners, and without discrimination between the spouses and domestic partners of such employees.

4. Contractor understands that Contractor will not be considered to be discriminating in the provision or application of employee benefits under the following conditions or circumstances:
 - a. If the actual cost of providing a benefit to a domestic partner or spouse exceeds the cost of providing the same benefit to a spouse or domestic partner of an employee, Contractor will not be required to provide the benefit, nor shall it be deemed discriminatory, if Contractor requires the employee to pay the monetary difference in order to provide the benefit to the domestic partner or to the spouse.
 - b. If Contractor is unable to provide a certain benefit, despite taking reasonable measures to do so, if Contractor provides the employee with a cash equivalent Contractor will not be deemed to be discriminating in the application of that benefit.
 - c. If Contractor provides employee benefits neither to employee's spouses nor to employee's

domestic partners.

- d. If Contractor provides employee benefits to employees on a basis unrelated to marital or domestic partner status.
 - e. If Contractor submits written evidence of making reasonable efforts to end discrimination in employee benefits by implementing policies that will be enacted before the first effective date after the first open enrollment process following the date this Agreement is executed by the City of Sacramento ("City"). Contractor understands that any delay in the implementation of such policies may not exceed one (1) year from the date this Agreement is executed by the City, and applies only to those employee benefits for which an open enrollment process is applicable.
 - f. Until administrative steps can be taken to incorporate nondiscrimination in employee benefits. The time allotted for these administrative steps will apply only to those employee benefits for which administrative steps are necessary and may not exceed three (3) months from the date this Agreement is executed by the City.
 - g. Until the expiration of a current collective bargaining agreement(s) if employee benefits are governed by such collective bargaining agreement(s).
 - h. Contractor takes all reasonable measures to end discrimination in employee benefits by either requesting that the union(s) involved agree to reopen the agreement(s) in order for Contractor to take whatever steps are necessary to end discrimination in employee benefits or by ending discrimination in employee benefits without reopening the collective bargaining agreement(s).
 - i. In the event Contractor cannot end discrimination in employee benefits despite taking all reasonable measures to do so, Contractor provides a cash equivalent to eligible employees for whom employee benefits are not available. Unless otherwise authorized in writing by the City Manager, Contractor understands this cash equivalent must begin at the time the union(s) refuse to allow the collective bargaining agreement(s) to be reopened or not longer than three (3) months after the date this Agreement is executed by the City.
5. Contractor understands that failure to comply with the provisions of Section 4(a) through 4(i), above, will subject Contractor to possible suspension and/or termination of this Agreement for cause; repayment of any or all of the Agreement amount disbursed by the City; debarment for future agreements until all penalties and restitution have been paid in full and/or for up to two (2) years; and/or the imposition of a penalty, payable to the City, in the sum of \$50.00 for each employee, for each calendar day during which the employee was discriminated against in violation of the provisions of the Ordinance.
6. Contractor understands and agrees to provide notice to each current employee and, within ten (10) days of hire, to each new employee, of their rights under the Ordinance. Contractor further agrees to maintain a copy of each such letter provided, in an appropriate file for inspection by authorized representatives of the City. Contractor also agrees to prominently display a poster informing each employee of these rights.
7. Contractor understands that Contractor has the right to request a waiver of, or exemption from, the provisions of the Ordinance by submitting a written request to the City's Procurement Services Division prior to Agreement award, which request shall identify the provision(s) of the Ordinance authorizing such waiver or exemption and the factual basis for such waiver or exemption. The City shall determine in its sole discretion whether to approve any such request.

8. Contractor agrees to defend, indemnify and hold harmless, the City, its officers and employees, against any claims, actions, damages, costs (including reasonable attorney fees), or other liabilities of any kind arising from any violation of the Requirements or of the Ordinance by Contractor.

The undersigned declares under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that he or she is authorized to bind the Contractor to the provisions of this Declaration.

Signature of Authorized Representative

Date

Print Name

Title

EXHIBIT A

PROFESSIONAL SERVICES AGREEMENT FOR DESIGN PROFESSIONALS

SCOPE OF SERVICES

1. Representatives.

The CITY Representative for this Agreement is:

*Julie Friedman, Environmental Services Manager
5730 24th Street, Building 8, Sacramento, CA 95822
Phone: (916) 808-7898 Fax: (916) 421-4596 E-mail: jfriedman@cityofsacramento.org*

All CONTRACTOR questions pertaining to this Agreement shall be referred to the CITY Representative or the Representative's designee.

The CONTRACTOR Representative for this Agreement is:

*Reinhard Sturm, Vice President
Water Systems Optimization, Inc.
290 Division Street, Suite 311, San Francisco, CA 94103
Phone: (415) 538-8641 Fax: (814) 286-1556*

All CITY questions pertaining to this Agreement shall be referred to the CONTRACTOR Representative. All correspondence to CONTRACTOR shall be addressed to the address set forth on page one of this Agreement. Unless otherwise provided in this Agreement, all correspondence to the CITY shall be addressed to the CITY Representative.

2. Professional Liability Insurance. Professional Liability (Errors and Omissions) insurance is X is not _____ [check one] required for this Agreement. If required, such coverage must be continued for at least three year(s) following the completion of all Services and Additional Services under this Agreement. (See Exhibit D, Section 11, for complete insurance requirements.)

3. Conflict of Interest Requirements.

A. **Generally.** Under the California Political Reform Act, Government Code §§ 81000 et seq., designated employees of the CITY are required to comply with the CITY's Conflict of Interest Code. The term "designated employees" is a term of art and includes individuals who are working for contractors who are providing services or performing work for the CITY and who are considered to be "consultants" under the Political Reform Act. The term "consultant" generally includes individuals who make, or participate in making, governmental decisions or who serve in a staff capacity. Individuals who perform work that is solely clerical, ministerial, manual or secretarial are not "consultants."

The CITY's Conflict of Interest Code requires designated employees, including individuals who qualify as "consultants", to file the following statements of economic interests:

- (1) An "assuming office" statement of economic interests to be filed within 30 days after execution of the agreement between the City and the contractor;

- (2) Annual statements of economic interests while the agreement remains in effect, to be filed not later than April 30 of each year; and
- (3) A “leaving office” statement of economic interests to be filed within 30 days of completion of the contract.

The above statements of economic interests are public records subject to public disclosure under the California Public Records Act.

The CITY’s Conflict of Interest Code also requires individuals who qualify as “consultants” under the Political Reform Act to comply with the conflict of interest provisions of the Political Reform Act, which generally prohibit individuals from making or participating in the making of decisions that will have a material financial effect on their economic interests.

- B. **Conflict of Interest Statements.** The individual(s) who will provide services or perform work pursuant to this Agreement are “consultants” within the meaning of the Political Reform Act and the CITY’s Conflict of Interest Code: _____ yes _____ no *[check one]*

If “yes” is checked above, CONTRACTOR shall cause the following to occur within 30 days after execution of this Agreement:

- (1) Identify the individuals who will provide services or perform work under this Agreement as “consultants”;
- (2) Cause these individuals to file with the CITY Representative the “assuming office” statements of economic interests required by the CITY’s Conflict of Interest Code.

Thereafter, throughout the term of the Agreement, CONTRACTOR shall cause these individuals to file with the CITY Representative annual statements of economic interests, and “leaving office” statements of economic interests, as required by the CITY’s Conflict of Interest Code. The CITY may withhold all or a portion of any payment due under this Agreement until all required statements are filed.

4. **Scope of Services.** *[Describe services to be provided here, or, if scope of services is described in an attachment, label the attachment “Attachment 1 to Exhibit A” and include the following sentence:]*

The services provided shall be as set forth in Attachment 1 to Exhibit A, attached hereto and incorporated herein.

5. **Time of Performance.** The services described herein shall be provided during the period, or in accordance with the schedule, set forth in Attachment 1 to Exhibit A, attached hereto and incorporated herein.

ATTACHMENT 1 TO EXHIBIT A

**City of Sacramento
Department of Utilities (DOU)
District Metered Area(s) (DMAs)
Pilot Study for Water Loss Control**

August 26, 2014

The following outlines the scope of work, the associated project budget and the suggested project implementation timeline.

Scope of Work

This project will be completed in two separate phases, as shown in the estimated budget. Phase 1 will include Task 1 (Select Pilot Study Area) and the initial setup subtasks under Task 2 (Implement 1-Year Pilot Study). Phase 2 will include the remaining subtasks under Task 2, and Task 3 (Report on Results).

TASK 1: SELECT PILOT STUDY AREAS

The goal of this project is to create three pilot DMAs within the DOU's distribution network. The DMAs will be created in areas where customers are preferably fully metered, either by Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI).

Together with the DOU Water Loss Control Committee, the project team will develop and finalize the DMA design criteria. Important criteria to consider when designing and implementing DMAs are: DMA size, infrastructure requirements, water quality, hydraulic integrity of DMA, number of supply points into the DMA, inflow chamber design, possible backup supply point, minimum flow and pressure requirements for fire flow and insurance, customer base in DMA, looping and redundancy requirements, and target leakage level.

The effectiveness of utilizing DMAs to better manage water losses in a given system is best assessed by considering various evaluation criteria such as: feasibility of creating hydraulically discrete zones, valuable infrastructure issues identified through creation of DMA boundaries (e.g. line valves/boundary vales not closing tight or not operable or unknown interconnections), water losses saved through quantification and abatement of leakage losses, cost benefit of DMA implementation, potential for deferment of infrastructure replacement, improved deployment/targeted deployment of leak detection teams, and quantification of leakage components in DMA.

Together with the DOU Water Loss Control Committee, the project team will review the City's distribution system maps in order to identify up to six areas that could serve as potential pilot study areas. DOU will provide the project team with access to electronic files/paper copies of the City's distribution system maps, and GIS, billing system and asset management databases system in order to obtain the necessary data including:

- Infrastructure age and condition
- Type of customers (residential, industrial, commercial)
- Type of customer meters
- Number of connections
- Pilot area size
- Ground elevation across the pilot study area
- Accessibility to install flow meters
- Location of fire hydrants
- Uniformity of pressure across the pilot study areas
- DMA boundary definition
- Desktop review of hydraulic and water quality pipe network performance
- Number of feeds to the pilot study area (preferably supplied via single main)
- Number of valves required to be closed for the pilot study area
- Number of water storage feeding the pilot study area
- Number of large or special customers

The project team will utilize the City's hydraulic model to perform a hydraulic analysis of the existing system compared to the reconfigured system for the pilot study. Ideally the hydraulic analysis will only be conducted for three pre-selected DMAs, only if these analysis indicate that a pre-selected DMA is not feasible will the project team conduct additional hydraulic analysis for up to a total of six potential DMAs. The project team assumes that the DOU's existing model is accurate, calibrated, and fully functioning as needed to perform the tasks required. The analyses will include an evaluation of average daily demand, peak daily demand and fire flow demand for the reconfigured areas. In addition, the analyses will locate potential water quality concerns and the need for flushing.

A technical memorandum (TM) will be prepare by the project team to present the results of the hydraulic analyses, and to recommend the preferred three DMA pilot study areas that will meet the DMA management principals and be capable of providing adequate service while meeting water quality requirements.

A meeting will be held with the DOU Water Loss Control Committee and the project team to review the results presented in the TM and confirm selection of the three DMA pilot study areas.

TASK 2 – IMPLEMENT 1-YEAR PILOT STUDY

Based on the results of Task 1 and the output from the hydraulic model, the DMA boundaries will be established by the project team by closing all necessary boundary valves for each of the three DMA pilot study areas. The project team will be present and document the results during the trial testing of the boundary valves by DOU staff. Because the principle of the permanent leakage monitoring based on DMAs is dependent on the hydraulic integrity of each DMA, it is paramount for the success of this program that the hydraulic integrity of the pilot DMA is further verified. WSO will deploy pressure loggers inside and outside of each DMA boundary to identify locations where the pressure patterns are similar, which would indicate that the DMA boundary is not tight. Based on the results of this trial valve closure, the project team will develop a list of boundary valves for each DMA that need to be addressed by DOU, in order to successfully isolate the three pilot DMAs.

- Infrastructure age and condition
- Type of customers (residential, industrial, commercial)
- Type of customer meters
- Number of connections
- Pilot area size
- Ground elevation across the pilot study area
- Accessibility to install flow meters
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Next, the project team will assist with the selection of the appropriate supply meter that might need to be installed for each DMA and advise on appropriate data collection technologies (data loggers, etc.) in case the supply meter will not be connected to the SCADA or AMI system. DOU will procure and install the recommended equipment and confirm each device is calibrated properly. City may collect information on the meter equipment and calibration results for inclusion in the final report.

Subsequently, the project team will assess the Water Loss Baseline for each of the three pilot DMAs by utilizing the DMA supply meter data collected and the AMR/AMI consumption data from the billing database, which will produce a mass balance. In addition the project team will quantify leakage losses in the three pilot DMAs based on the "Minimum Night Time Flow" measurement principle. These measurements will accurately quantify the leakage volume in each of the three pilot DMAs.

It is recommended that DOU then direct the two Department's leak detection crews to find and repair any leaks in each of the three pilot DMAs to reduce the leakage volume to a minimum. Once this work is completed, the project team will undertake a second DMA leakage assessment in order to measure and quantify the leakage volume after the intervention. By comparison of the "before" and "after" leakage volumes, it will be possible to accurately quantify the volume of water saved by the leak detection and repair activities.

The final water loss baseline for each of the three pilot DMAs will serve as a reference point against which the increase in leakage will be monitored over time. As leakage rises above a set threshold, through out the pilot project phase the project team will alert DOU to deploy the leak detection crew to identify and abate the excess leakage in the three pilot DMAs.

PB will meet with DOU's Operation and Maintenance staff affected by the three DMA pilot study areas to discuss when and how these changes will impact the operation of this section of the distribution system.

TASK 3: REPORT ON RESULTS

Upon completion of the pilot phase, the project team will prepare a final report discussing the results and findings of the pilot study. The final report will also include recommendations for DOU's future water loss control strategy and whether it is feasible to implement DMAs throughout the City's distribution system. This final analysis will include a preliminary cost benefit analysis of implementing the trail DMAs. Final results and recommendations will be presented to the Water Loss Program Committee, including a PowerPoint presentation.

District Metered Area(s) (DMAs) Pilot Study for Water Loss Control Estimated Budget

TABLE 1.A Water Systems Optimization (WSO) LABOR BUDGET - THREE DMAs

Month	Phase / FY	Task No.	Task Description	WSO Staff Hours			Total WSO Hours	Total WSO Direct Costs	Total WSO Cost	
				Steve Preston	Reinhard Sturm	William Elman				
August 2014 to April 2015	Phase 1 FY14/15	1	Hourly Rate	\$ 200	\$ 240	\$ 100				
			Select Pilot Study Area							
		1.1	Pilot Program Design and Development of Evaluation Process	6	34	0	40		\$ 9,360	
		1.2	Review Maps and Identify Up to Six Suitable Areas	0	24	0	24		\$ 5,760	
		1.3	Prepare List of Study Areas Attributes	0	6	0	6		\$ 1,440	
		1.4	Run Hydraulic Model For Up To Six Potential Study Areas	0	12	0	12		\$ 2,880	
		1.5	Produce TM and Meet with the City to Discuss model and Pilot Study Area Selection	0	32	16	48		\$ 9,280	
		2	Implement 1-Year Pilot Study							
		2.1	Establish DMA Boundary	0	20	64	84		\$ 11,200	
		2.2	Selection of DMA Meter and Data Recording Equipment	12	20	6	38		\$ 7,800	
July 2015 to September 2015	Phase 1 FY15/15	2.3	DMA Water Loss Baseline Calculation	18	148	86	252		\$ 47,720	
		2.4	Inform O&M Staff Affected By Distribution System Changes	7	57	84	148		\$ 23,480	
		2.5	DMA Performance Test	0	8	0	8		\$ 1,920	
		3	Report on Results	0	6	0	6		\$ 1,440	
		3.1	Analyze and Summarize Results in a Report and Prepare PowerPoint Presentation	12	48	48	108		\$ 18,720	
		3.2	Cost Benefit Analysis and Presentation of Final Results to Water Loss Program Committee	0	16	8	24		\$ 4,640	
		Phase 2 FY15/16			19	135	140	294		\$ 50,200
		Phase 2 FY15/16			37	283	226	546		\$ 97,920
		Phase 2 FY15/16								
		Phase 2 FY15/16								
Total Hours				37	283	226	546			
Total WSO Labor Cost				\$ 7,400	\$ 67,920	\$ 22,600		\$ 97,920		
Total WSO Directs								\$ -		
Total WSO Cost								\$ 97,920		

TABLE 2.A SUBCONSULTANT COST BUDGET - THREE DMAS

Month	Phase / FY	Task No.	Task Description	Parsons Brinckerhoff (PB) Staff Hours				Total PB Hours	Total PB Direct Costs	Total PB Cost
				Sr Supv Engineer Local Client Coordination	Sr Engineer Hydraulic Modeler	Engineering Technician				
August 2014 to April 2015	Phase 1 FY14/15	1	Select Pilot Study Area	P-13 203	P-10 126	T-07 70	14	\$ 2,688	\$ 2,688	
		1.1	Pilot Program Design and Development of Evaluation Process		2	0	42	\$ 6,188	\$ 6,188	
		1.2	Review Maps and Identify Up to Six Suitable Areas	16	20	6	54	\$ 4,718	\$ 4,718	
		1.3	Prepare List of Study Areas Attributes	2	12	40	152	\$ 19,306	\$ 19,306	
		1.4	Run Hydraulic Model for Up To Six Potential Study Areas	2	150	0	30	\$ 4,172	\$ 4,172	
		1.5	Produce TM and Meet with the City to Discuss model and Pilot Study Area Selection	8	18	4	20	\$ 3,444	\$ 3,444	
		2	Implement 1-Year Pilot Study				8	\$ 1,316	\$ 1,316	
		2.1	Establish DMA Boundary	12	8	0	320	\$ 41,832	\$ 41,832	
		2.2	Selection of DMA Meter and Data Recording Equipment	4	4	0	24	\$ 3,640	\$ 3,640	
		2.3	DMA Water Loss Baseline Calculation	56	214	50	32	\$ 5,264	\$ 5,264	
July 2015 to September 2015	Phase 2 FY15/16	2.4	Inform O&M Staff Affected By Distribution System Changes	8	16	0	72	\$ 7,000	\$ 7,000	
		2.5	DMA Performance Test	16	16	0	80	\$ 11,032	\$ 11,032	
		3	Report on Results	8	16	48	10	\$ 1,645	\$ 1,645	
		3.1	Analyze and Summarize Results in a Report and Prepare PowerPoint Presentation	24	40	16	218	\$ 28,581	\$ 28,581	
		3.2	Cost Benefit Analysis and Presentation of Final Results to Water Loss Program Committee	5	5	0	80	\$ 11,032	\$ 11,032	
		61		5	5	0	10	\$ 1,645	\$ 1,645	
		307		93	64	114	538	\$ 70,413	\$ 70,413	
		117		307	114	144	750	\$ 750	\$ 750	
		23,751		38,682	7,980	750	71,163	\$ 71,163	\$ 71,163	
		23,751		38,682	7,980	750	71,163	\$ 71,163	\$ 71,163	

TABLE 3. TOTAL ESTIMATED BUDGET SUMMARY - THREE DMAs - By Phase and FY

Month	Phase / FY	Task No.	Task Description	Task Total Budget	WSO Labor Cost	PB Labor Cost	PB Directs Cost	
August 2014 to April 2015	Phase 1 FY14/15	1	Select Pilot Study Area					
		1.1	Pilot Program Design and Development of Evaluation Process	\$ 12,048	\$ 9,360	\$ 2,688		
		1.2	Review Maps and Identify Up to Six Suitable Areas	\$ 11,948	\$ 5,760	\$ 6,188		
		1.3	Prepare List of Study Areas Attributes	\$ 6,158	\$ 1,440	\$ 4,718		
		1.4	Run Hydraulic Model for Up To Six Potential Study Areas	\$ 22,186	\$ 2,880	\$ 19,306		
		1.5	Produce TM and Meet with the City to Discuss model and Pilot Study Area Selection	\$ 13,452	\$ 9,280	\$ 4,172		
		2	Implement 1-Year Pilot Study					
		2.1	Establish DMA Boundary	\$ 14,644	\$ 11,200	\$ 3,444		
		2.2	Selection of DMA Meter and Data Recording Equipment	\$ 9,116	\$ 7,800	\$ 1,316		
		Phase 1						
		2.3	DMA Water Loss Baseline Calculation	\$ 90,002	\$ 47,720	\$ 41,832	\$ 450	
		2.4	Inform O&M Staff Affected By Distribution System Changes	\$ 27,120	\$ 23,480	\$ 3,640		
		2.5	DMA Performance Test	\$ 7,184	\$ 1,920	\$ 5,264		
		3	Report on Results	\$ 8,440	\$ 1,440	\$ 7,000		
		3.1	Analyze and Summarize Results in a Report and Prepare Powerpoint Presentation	\$ 29,752	\$ 18,720	\$ 11,032		
3.2	Cost Benefit Analysis and Presentation of Final Results to Water Loss Program Committee	\$ 6,285	\$ 4,640	\$ 1,645				
Phase 2								
				\$ 79,081	\$ 50,200	\$ 28,581	\$ 300	
Total Labor Cost				\$ 169,083	\$ 97,920	\$ 70,413		
Total Directs				\$ 750	\$ -	\$ 750		
Total Cost				\$ 169,833	\$ 97,920	\$ 71,163		
July 2015 to September 2015	Phase 2 FY15/16	3.1	Analyze and Summarize Results in a Report and Prepare Powerpoint Presentation	\$ 29,752	\$ 18,720	\$ 11,032		
	Phase 2 FY15/16	3.2	Cost Benefit Analysis and Presentation of Final Results to Water Loss Program Committee	\$ 6,285	\$ 4,640	\$ 1,645		
Phase 2								
				\$ 79,081	\$ 50,200	\$ 28,581	\$ 300	
Total Labor Cost				\$ 169,083	\$ 97,920	\$ 70,413		
Total Directs				\$ 750	\$ -	\$ 750		
Total Cost				\$ 169,833	\$ 97,920	\$ 71,163		

District Metered Area(s) (DMAs) Pilot Study for Water Loss Control Implementation Timeline

The anticipated project timeline was prepared to reflect the need to implement three Pilot DMAs in an efficient and cost effective manner.

Phase / FY	TASK	Phase 1	Timeline
Phase 1 FY14/15	1	Select Pilot Study Area	
Phase 1 FY14/15	1.1	Pilot Program Design and Development of Evaluation Process	29 Sep - 15 Oct - 2014
Phase 1 FY14/15	1.2	Review Maps and Identify Up to Six Suitable Areas	01 Oct - 31 Oct - 2014
Phase 1 FY14/15	1.3	Prepare List of Study Area Attributes	18 Aug - 30 Sep - 2014
Phase 1 FY14/15	1.4	Run Hydraulic Model for Up to Six Potential Study Areas	15 Oct - 30 Nov - 2014
Phase 1 FY14/15	1.5	Produce TM and Meet with the City to Discuss model and Pilot Study Area Selection	01 Dec - 31 Dec -2014
Phase 1 FY14/15	2	Implement 1-Year Pilot Study	
Phase 1 FY14/15	2.1	Establish DMA Boundary	01 Jan - 30 Mar - 2015
Phase 1 FY14/15	2.2	Selection of DMA Meter and Data Recording Equipment	30 Mar - 30 Apr - 2015
Phase / FY		Phase 2	
Phase 2 FY15/16	2.3	DMA Water Loss Baseline Calculation	01 Jul - 15 Jul - 2015
Phase 2 FY15/16	2.4	Inform O&M Staff Affected By Distribution System Changes	01 Aug - 15 Aug - 2015
Phase 2 FY15/16	2.5	DMA Performance Test	01 Jul - 28 Jul - 2015
Phase 2 FY15/16	3	Report on Results	
Phase 2 FY15/16	3.1	Summarize Results in a Report and Prepare PowerPoint Presentation	01 Sep - 30 Sep - 2015
Phase 2 FY15/16	3.2	Cost Benefit Analysis and Presentation of Final Results to Water Loss Program Committee	30 Sep - 2015

EXHIBIT B

PROFESSIONAL SERVICES AGREEMENT FOR DESIGN PROFESSIONALS

FEE SCHEDULE/MANNER OF PAYMENT

1. **CONTRACTOR's Compensation.** The total of all fees paid to the CONTRACTOR for the performance of all services set forth in Exhibit A, including normal revisions (hereafter the "Services"), and for all authorized Reimbursable Expenses, shall not exceed the total sum of \$ 169,083.00.
2. **Billable Rates.** CONTRACTOR shall be paid for the performance of Services on an hourly rate, daily rate, flat fee, lump sum or other basis, as set forth in Attachment 1 to Exhibit B, attached hereto and incorporated herein.
3. **CONTRACTOR's Reimbursable Expenses.** Reimbursable Expenses shall be limited to actual expenditures of CONTRACTOR for expenses that are necessary for the proper completion of the Services and shall only be payable if specifically authorized in advance by CITY.
4. **Payments to CONTRACTOR.**
 - A. Payments to CONTRACTOR shall be made within a reasonable time after receipt of CONTRACTOR's invoice, said payments to be made in proportion to services performed or as otherwise specified in Attachment 1 to Exhibit B. CONTRACTOR may request payment on a monthly basis. CONTRACTOR shall be responsible for the cost of supplying all documentation necessary to verify the monthly billings to the satisfaction of CITY.
 - B. All invoices submitted by CONTRACTOR shall contain the following information:
 - (1) Job Name
 - (2) Description of services billed under this invoice, and overall status of project
 - (3) Date of Invoice Issuance
 - (4) Sequential Invoice Number
 - (5) CITY's Purchase Order Number
 - (6) Total Contract Amount
 - (7) Amount of this Invoice (Itemize all Reimbursable Expenses)
 - (8) Total Billed to Date
 - (9) Total Remaining on Contract
 - (10) Updated project schedule. This shall identify those steps that shall be taken to bring the project back on schedule if it is behind schedule.
 - C. Items shall be separated into Services and Reimbursable Expenses. Billings that do not conform to the format outlined above shall be returned to CONTRACTOR for correction. CITY shall not be responsible for delays in payment to CONTRACTOR resulting from CONTRACTOR's failure to comply with the invoice format described below.

D. Requests for payment shall be sent to:

*Department of Utilities
1391 35th Avenue, Sacramento, CA 95822
Phone (916) 808-1426 Fax (916) 808-1497
Attn: Annette Atkins*

5. **Additional Services.** Additional Services are those services related to the scope of services of CONTRACTOR set forth in Exhibit A but not anticipated at the time of execution of this Agreement. Additional Services shall be provided only when a Supplemental Agreement authorizing such Additional Services is approved by CITY in accordance with CITY's Supplemental Agreement procedures. CITY reserves the right to perform any Additional Services with its own staff or to retain other consultants to perform said Additional Services.
6. **Accounting Records of CONTRACTOR.** During performance of this Agreement and for a period of three (3) years after completing all Services and Additional Services hereunder, CONTRACTOR shall maintain all accounting and financial records related to this Agreement, including, but not limited to, records of CONTRACTOR's costs for all Services and Additional Services performed under this Agreement and records of CONTRACTOR's Reimbursable Expenses, in accordance with generally accepted accounting practices, and shall keep and make such records available for inspection and audit by representatives of the CITY upon reasonable written notice.
7. **Taxes.** CONTRACTOR shall pay, when and as due, any and all taxes incurred as a result of CONTRACTOR's compensation hereunder, including estimated taxes, and shall provide CITY with proof of such payment upon request. CONTRACTOR hereby agrees to indemnify CITY for any claims, losses, costs, fees, liabilities, damages or injuries suffered by CITY arising out of CONTRACTOR's breach of this Section 7.

ATTACHMENT 1 TO EXHIBIT B

RATE SHEET
City of Sacramento Department of Utilities (DOU)
Request For Qualifications Q14141411020
District Metered Areas (DMAs) Pilot Study for Water Loss
Control

Staff Member	Billable Hourly Rate
WSO	
Steve Preston	\$200
Reinhard Sturm	\$240
William Elman	\$100
Parsons Brinckerhoff	
Sr Supv Engineer - Local Client Coordination (P-13)	\$203
Sr Engineer - Hydraulic Modeler (P-10)	\$126
Engineering Technician (T-07)	\$70

7/28/2014

EXHIBIT C

PROFESSIONAL SERVICES AGREEMENT FOR DESIGN PROFESSIONALS

FACILITIES AND EQUIPMENT TO BE PROVIDED BY CITY

CITY shall [*check one*]

X Not furnish any facilities or equipment for this Agreement; or

_____ furnish the following facilities or equipment for the Agreement [*list, if applicable*]:

EXHIBIT D

PROFESSIONAL SERVICES AGREEMENT FOR DESIGN PROFESSIONALS

GENERAL PROVISIONS

1. Independent Contractor.

- A. It is understood and agreed that CONTRACTOR (including CONTRACTOR's employees) is an independent contractor and that no relationship of employer-employee exists between the parties hereto for any purpose whatsoever. Neither CONTRACTOR nor CONTRACTOR's assigned personnel shall be entitled to any benefits payable to employees of CITY. CITY is not required to make any deductions or withholdings from the compensation payable to CONTRACTOR under the provisions of this Agreement, and CONTRACTOR shall be issued a Form 1099 for its services hereunder. As an independent contractor, CONTRACTOR hereby agrees to indemnify and hold CITY harmless from any and all claims that may be made against CITY based upon any contention by any of CONTRACTOR's employees or by any third party, including but not limited to any state or federal agency, that an employer-employee relationship or a substitute therefor exists for any purpose whatsoever by reason of this Agreement or by reason of the nature and/or performance of any Services under this Agreement. (As used in this Exhibit D, the term "Services" shall include both Services and Additional Services as such terms are defined elsewhere in this Agreement.)
- B. It is further understood and agreed by the parties hereto that CONTRACTOR, in the performance of its obligations hereunder, is subject to the control and direction of CITY as to the designation of tasks to be performed and the results to be accomplished under this Agreement, but not as to the means, methods, or sequence used by CONTRACTOR for accomplishing such results. To the extent that CONTRACTOR obtains permission to, and does, use CITY facilities, space, equipment or support services in the performance of this Agreement, this use shall be at the CONTRACTOR's sole discretion based on the CONTRACTOR's determination that such use will promote CONTRACTOR's efficiency and effectiveness. Except as may be specifically provided elsewhere in this Agreement, the CITY does not require that CONTRACTOR use CITY facilities, equipment or support services or work in CITY locations in the performance of this Agreement.
- C. If, in the performance of this Agreement, any third persons are employed by CONTRACTOR, such persons shall be entirely and exclusively under the direction, supervision, and control of CONTRACTOR. Except as may be specifically provided elsewhere in this Agreement, all terms of employment, including hours, wages, working conditions, discipline, hiring, and discharging, or any other terms of employment or requirements of law, shall be determined by CONTRACTOR. It is further understood and agreed that CONTRACTOR shall issue W-2 or 1099 Forms for income and employment tax purposes, for all of CONTRACTOR's assigned personnel and subcontractors.
- D. The provisions of this Section 1 shall survive any expiration or termination of this Agreement. Nothing in this Agreement shall be construed to create an exclusive relationship between CITY and CONTRACTOR. CONTRACTOR may represent, perform services for, or be employed by such additional persons or companies as CONTRACTOR sees fit provided that CONTRACTOR does not violate the provisions of Section 5, below.

2. **Licenses; Permits, Etc.** CONTRACTOR represents and warrants that CONTRACTOR has all licenses, permits, City Business Operations Tax Certificate, qualifications, and approvals of whatsoever nature that are legally required for CONTRACTOR to practice its profession or provide any services under the Agreement. CONTRACTOR represents and warrants that CONTRACTOR shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement any licenses, permits, and approvals that are legally required for CONTRACTOR to practice its profession or provide such Services. Without limiting the generality of the foregoing, if CONTRACTOR is an out-of-state corporation, CONTRACTOR warrants and represents that it possesses a valid certificate of qualification to transact business in the State of California issued by the California Secretary of State pursuant to Section 2105 of the California Corporations Code.
3. **Time.** CONTRACTOR shall devote such time and effort to the performance of Services pursuant to this Agreement as is necessary for the satisfactory and timely performance of CONTRACTOR's obligations under this Agreement. Neither party shall be considered in default of this Agreement, to the extent that party's performance is prevented or delayed by any cause, present or future, that is beyond the reasonable control of that party.
4. **CONTRACTOR Not Agent.** Except as CITY may specify in writing, CONTRACTOR and CONTRACTOR's personnel shall have no authority, express or implied, to act on behalf of CITY in any capacity whatsoever as an agent. CONTRACTOR and CONTRACTOR's personnel shall have no authority, express or implied, to bind CITY to any obligations whatsoever.
5. **Conflicts of Interest.** CONTRACTOR covenants that neither it, nor any officer or principal of its firm, has or shall acquire any interest, directly or indirectly, that would conflict in any manner with the interests of CITY or that would in any way hinder CONTRACTOR's performance of Services under this Agreement. CONTRACTOR further covenants that in the performance of this Agreement, no person having any such interest shall be employed by it as an officer, employee, agent or subcontractor, without the written consent of CITY. CONTRACTOR agrees to avoid conflicts of interest or the appearance of any conflicts of interest with the interests of CITY at all times during the performance of this Agreement. If CONTRACTOR is or employs a former officer or employee of the CITY, CONTRACTOR and any such employee(s) shall comply with the provisions of Sacramento City Code Section 2.16.090 pertaining to appearances before the City Council or any CITY department, board, commission or committee.
6. **Confidentiality of CITY Information.** During performance of this Agreement, CONTRACTOR may gain access to and use CITY information regarding inventions, machinery, products, prices, apparatus, costs, discounts, future plans, business affairs, governmental affairs, processes, trade secrets, technical matters, systems, facilities, customer lists, product design, copyright, data, and other vital information (hereafter collectively referred to as "City Information") that are valuable, special and unique assets of the CITY. CONTRACTOR agrees to protect all City Information and treat it as strictly confidential, and further agrees that CONTRACTOR shall not at any time, either directly or indirectly, divulge, disclose or communicate in any manner any City Information to any third party without the prior written consent of CITY. In addition, CONTRACTOR shall comply with all CITY policies governing the use of the CITY network and technology systems, as set forth in applicable provisions of the City of Sacramento Administrative Policy Instructions # 30. A violation by CONTRACTOR of this Section 6 shall be a material violation of this Agreement and shall justify legal and/or equitable relief.

7. CONTRACTOR Information.

- A. CITY shall have full ownership and control, including ownership of any copyrights, of all information prepared, produced, or provided by CONTRACTOR pursuant to this Agreement. In this Agreement, the term “information” shall be construed to mean and include: any and all work product, submittals, reports, plans, specifications, and other deliverables consisting of documents, writings, handwritings, typewriting, printing, photostating, photographing, computer models, and any other computerized data and every other means of recording any form of information, communications, or representation, including letters, works, pictures, drawings, sounds, or symbols, or any combination thereof. CONTRACTOR shall not be responsible for any unauthorized modification or use of such information for other than its intended purpose by CITY.
- B. CONTRACTOR shall fully defend, indemnify and hold harmless CITY, its officers and employees, and each and every one of them, from and against any and all claims, actions, lawsuits or other proceedings alleging that all or any part of the information prepared, produced, or provided by CONTRACTOR pursuant to this Agreement infringes upon any third party’s trademark, trade name, copyright, patent or other intellectual property rights. CITY shall make reasonable efforts to notify CONTRACTOR not later than ten (10) days after CITY is served with any such claim, action, lawsuit or other proceeding, provided that CITY’s failure to provide such notice within such time period shall not relieve CONTRACTOR of its obligations hereunder, which shall survive any termination or expiration of this Agreement.
- C. All proprietary and other information received from CONTRACTOR by CITY, whether received in connection with CONTRACTOR’s proposal to CITY or in connection with any Services performed by CONTRACTOR, will be disclosed upon receipt of a request for disclosure, pursuant to the California Public Records Act; provided, however, that, if any information is set apart and clearly marked “trade secret” when it is provided to CITY, CITY shall give notice to CONTRACTOR of any request for the disclosure of such information. The CONTRACTOR shall then have five (5) days from the date it receives such notice to enter into an agreement with the CITY, satisfactory to the City Attorney, providing for the defense of, and complete indemnification and reimbursement for all costs (including plaintiff’s attorney fees) incurred by CITY in any legal action to compel the disclosure of such information under the California Public Records Act. The CONTRACTOR shall have sole responsibility for defense of the actual “trade secret” designation of such information.
- D. The parties understand and agree that any failure by CONTRACTOR to respond to the notice provided by CITY and/or to enter into an agreement with CITY, in accordance with the provisions of subsection C, above, shall constitute a complete waiver by CONTRACTOR of any rights regarding the information designated “trade secret” by CONTRACTOR, and such information shall be disclosed by CITY pursuant to applicable procedures required by the Public Records Act.

- 8. Standard of Performance.** CONTRACTOR shall perform all Services required pursuant to this Agreement in the manner and according to the standards currently observed by a competent practitioner of CONTRACTOR’s profession in California. All products of whatsoever nature that CONTRACTOR delivers to CITY pursuant to this Agreement shall be prepared in a professional manner and conform to the standards of quality normally observed by a person currently practicing in CONTRACTOR’s profession, and shall be provided in accordance with any schedule of performance specified in Exhibit A. CONTRACTOR shall assign only competent personnel to perform Services pursuant to this Agreement.

CONTRACTOR shall notify CITY in writing of any changes in CONTRACTOR's staff assigned to perform the Services required under this Agreement, prior to any such performance. In the event that CITY, at any time during the term of this Agreement, desires the removal of any person assigned by CONTRACTOR to perform Services pursuant to this Agreement, because CITY, in its sole discretion, determines that such person is not performing in accordance with the standards required herein, CONTRACTOR shall remove such person immediately upon receiving notice from CITY of the desire of CITY for the removal of such person.

9. Term; Suspension; Termination.

- A. This Agreement shall become effective on the date that it is approved by both parties, set forth on the first page of the Agreement, and shall continue in effect until both parties have fully performed their respective obligations under this Agreement, unless sooner terminated as provided herein.
- B. CITY shall have the right at any time to temporarily suspend CONTRACTOR's performance hereunder, in whole or in part, by giving a written notice of suspension to CONTRACTOR. If CITY gives such notice of suspension, CONTRACTOR shall immediately suspend its activities under this Agreement, as specified in such notice.
- C. CITY shall have the right to terminate this Agreement at any time by giving a written notice of termination to CONTRACTOR. If CITY gives such notice of termination, CONTRACTOR shall immediately cease rendering Services pursuant to this Agreement. If CITY terminates this Agreement:
 - (1) CONTRACTOR shall, not later than five days after such notice of termination, deliver to CITY copies of all information prepared pursuant to this Agreement.
 - (2) CITY shall pay CONTRACTOR the reasonable value of Services rendered by CONTRACTOR prior to termination; provided, however, CITY shall not in any manner be liable for lost profits that might have been made by CONTRACTOR had the Agreement not been terminated or had CONTRACTOR completed the Services required by this Agreement. In this regard, CONTRACTOR shall furnish to CITY such financial information as in the judgment of the CITY is necessary for CITY to determine the reasonable value of the Services rendered by CONTRACTOR. The foregoing is cumulative and does not affect any right or remedy that CITY may have in law or equity.

10. Indemnity.

- A. Indemnity: CONTRACTOR shall defend, hold harmless and indemnify CITY, its officers and employees, and each and every one of them, from and against any and all claims, actions, damages, costs, liabilities, demands, losses, judgments, penalties and expenses of every type and description, including, but not limited to, any fees and/or costs reasonably incurred by CITY's staff attorneys or outside attorneys and any fees and expenses incurred in enforcing this provision (hereafter collectively referred to as "Claims"), including but not limited to Claims arising from personal injury or death, damage to personal, real, or intellectual property, or the environment, contractual or other economic damages, or regulatory penalties, that arise out of, pertain to, or relate to any negligent act or omission, recklessness, or willful misconduct of CONTRACTOR, its sub-consultants, subcontractors, or agents, and their respective officers and employees, in connection with performance of or failure to perform this Agreement, whether or

not such Claims are litigated, settled, or reduced to judgment; provided that the foregoing indemnity does not apply to liability for damages for death or bodily injury to persons, injury to property, or other loss, damage, or expense to the extent arising from (i) the sole negligence or willful misconduct of, or defects in design furnished by, CITY, its agents, servants, or independent contractors who are directly responsible to CITY, or (ii) the active negligence of CITY.

B. Insurance Policies; Intellectual Property Claims: The existence or acceptance by CITY of any of the insurance policies or coverages described in this Agreement shall not affect or limit any of CITY's rights under this Section 10, nor shall the limits of such insurance limit the liability of CONTRACTOR hereunder. This Section 10 shall not apply to any intellectual property claims, actions, lawsuits, or other proceedings subject to the provisions of Section 7.B., above. The provisions of this Section 10 shall survive any expiration or termination of this Agreement.

11. Insurance Requirements. During the entire term of this Agreement, CONTRACTOR shall maintain the insurance coverage described in this Section 11.

Full compensation for all premiums that CONTRACTOR is required to pay for the insurance coverage described herein shall be included in the compensation specified for the Services provided by CONTRACTOR under this Agreement. No additional compensation will be provided for CONTRACTOR's insurance premiums.

It is understood and agreed by the CONTRACTOR that its liability to the CITY shall not in any way be limited to or affected by the amount of insurance coverage required or carried by the CONTRACTOR in connection with this Agreement.

A. Minimum Scope & Limits of Insurance Coverage

- (1) Commercial General Liability Insurance, providing coverage at least as broad as ISO CGL Form 00 01 on an occurrence basis for bodily injury, including death, of one or more persons, property damage and personal injury, with limits of not less than one million dollars (\$1,000,000) per occurrence. The policy shall provide contractual liability and products and completed operations coverage for the term of the policy.
- (2) Automobile Liability Insurance providing coverage at least as broad as ISO Form CA 00 01 on an occurrence basis for bodily injury, including death, of one or more persons, property damage and personal injury, with limits of not less than one million dollars (\$1,000,000) per occurrence. The policy shall provide coverage for owned, non-owned and/or hired autos as appropriate to the operations of the CONTRACTOR.

No automobile liability insurance shall be required if CONTRACTOR completes the following certification:

"I certify that a motor vehicle will not be used in the performance of any work or services under this agreement." _____ (CONTRACTOR initials)

- (3) Workers' Compensation Insurance with statutory limits, and Employers' Liability Insurance with limits of not less than one million dollars (\$1,000,000). The Worker's Compensation policy shall include a waiver of subrogation for contracts involving construction or maintenance, or if required by the CITY by selecting the option below:

X Workers' Compensation waiver of subrogation in favor of the City is required for all work performed by the CONTRACTOR.

No Workers' Compensation insurance shall be required if CONTRACTOR completes the following certification:

"I certify that my business has no employees, and that I do not employ anyone. I am exempt from the legal requirements to provide Workers' Compensation insurance." _____ (CONTRACTOR initials)

- (4) Professional Liability Insurance providing coverage on a claims made basis for errors, omissions or malpractice with limits of not less than one million (\$1,000,000) dollars if required by the CITY under Exhibit A, Section 2.

B. Additional Insured Coverage

- (1) Commercial General Liability Insurance: The CITY, its officials, employees and volunteers shall be covered by policy terms or endorsement as additional insureds as respects general liability arising out of activities performed by or on behalf of CONTRACTOR, products and completed operations of CONTRACTOR, and premises owned, leased or used by CONTRACTOR. The general liability additional insured endorsement must be signed by an authorized representative of the insurance carrier for contracts involving construction or maintenance, or if required by the CITY by selecting the option below:

 X Additional insured endorsement must be signed by an authorized representative of the insurance carrier.

If the policy includes a blanket additional insured endorsement or contractual additional insured coverage, the above signature requirement may be fulfilled by submitting that document with a signed declaration page referencing the blanket endorsement or policy form.

- (2) Automobile Liability Insurance: The CITY, its officials, employees and volunteers shall be covered by policy terms or endorsement as additional insureds as respects auto liability.

C. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

- (1) Except for professional liability, CONTRACTOR's insurance coverage shall be primary insurance as respects CITY, its officials, employees and volunteers. Any insurance or self-insurance maintained by CITY, its officials, employees or volunteers shall be in excess of CONTRACTOR's insurance and shall not contribute with it.
- (2) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to CITY, its officials, employees or volunteers.
- (3) Coverage shall state that CONTRACTOR's insurance shall apply separately to each

insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

- (4) CITY will be provided with thirty (30) days written notice of cancellation or material change in the policy language or terms.

D. Acceptability of Insurance

Insurance shall be placed with insurers with a Bests' rating of not less than A:V. Self-insured retentions, policy terms or other variations that do not comply with the requirements of this Section 11 must be declared to and approved by the CITY Risk Management Division in writing prior to execution of this Agreement.

E. Verification of Coverage

- (1) CONTRACTOR shall furnish CITY with certificates and required endorsements evidencing the insurance required. The certificates and endorsements shall be forwarded to the CITY representative named in Exhibit A. Copies of policies shall be delivered to the CITY on demand. Certificates of insurance shall be signed by an authorized representative of the insurance carrier.
- (2) The CITY may withdraw its offer of contract or cancel this Agreement if the certificates of insurance and endorsements required have not been provided prior to execution of this Agreement. The CITY may withhold payments to CONTRACTOR and/or cancel the Agreement if the insurance is canceled or CONTRACTOR otherwise ceases to be insured as required herein.

F. Subcontractors

CONTRACTOR shall require and verify that all sub-consultants and subcontractors maintain insurance coverage that meets the minimum scope and limits of insurance coverage specified in subsection A, above.

12. Equal Employment Opportunity. During the performance of this Agreement, CONTRACTOR, for itself, its assignees and successors in interest, agrees as follows:

- A. Compliance With Regulations: CONTRACTOR shall comply with the Executive Order 11246 entitled "Equal Opportunity in Federal Employment", as amended by Executive Order 11375 and 12086, and as supplemented in Department of Labor regulations (41 CFR Chapter 60), hereinafter collectively referred to as the "Regulations".
- B. Nondiscrimination: CONTRACTOR, with regards to the work performed by it after award and prior to completion of the work pursuant to this Agreement, shall not discriminate on the ground of race, color, religion, sex, national origin, age, marital status, physical handicap or sexual orientation in selection and retention of subcontractors, including procurement of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in discrimination prohibited by the Regulations.

- C. Solicitations for Subcontractors, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiations made by CONTRACTOR for work to be performed under any subcontract, including all procurement of materials or equipment, each potential subcontractor or supplier shall be notified by CONTRACTOR of CONTRACTOR's obligation under this Agreement and the Regulations relative to nondiscrimination on the ground of race, color, religion, sex, national origin, age, marital status, physical handicap or sexual orientation.
- D. Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or by any orders or instructions issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the CITY to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the CITY, and shall set forth what efforts it has made to obtain the information.
- E. Sanctions for Noncompliance: In the event of noncompliance by CONTRACTOR with the nondiscrimination provisions of this Agreement, the CITY shall impose such sanctions as it may determine to be appropriate including, but not limited to:
- (1) Withholding of payments to CONTRACTOR under this Agreement until CONTRACTOR complies;
 - (2) Cancellation, termination, or suspension of the Agreement, in whole or in part.
- F. Incorporation of Provisions: CONTRACTOR shall include the provisions of subsections A through E, above, in every subcontract, including procurement of materials and leases of equipment, unless exempted by the Regulations, or by any order or instructions issued pursuant thereto. CONTRACTOR shall take such action with respect to any subcontract or procurement as the CITY may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, CONTRACTOR may request CITY to enter such litigation to protect the interests of CITY.

13. Entire Agreement. This document, including all Exhibits, contains the entire agreement between the parties and supersedes whatever oral or written understanding they may have had prior to the execution of this Agreement. No alteration to the terms of this Agreement shall be valid unless approved in writing by CONTRACTOR, and by CITY, in accordance with applicable provisions of the Sacramento City Code.

14. Severability. If any portion of this Agreement or the application thereof to any person or circumstance shall be held invalid or unenforceable, the remainder of this Agreement shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

15. Waiver. Neither CITY acceptance of, or payment for, any Service or Additional Service performed by CONTRACTOR, nor any waiver by either party of any default, breach or condition precedent, shall be construed as a waiver of any provision of this Agreement, nor as a waiver of any other default, breach or condition precedent or any other right hereunder.

- 16. Enforcement of Agreement.** This Agreement shall be governed, construed and enforced in accordance with the laws of the State of California. Venue of any litigation arising out of or connected with this Agreement shall lie exclusively in the state trial court or Federal District Court located in Sacramento County in the State of California, and the parties consent to jurisdiction over their persons and over the subject matter of any such litigation in such courts, and consent to service of process issued by such courts.
- 17. Assignment Prohibited.** The expertise and experience of CONTRACTOR are material considerations for this Agreement. CITY has a strong interest in the qualifications and capability of the persons and entities that will fulfill the obligations imposed on CONTRACTOR under this Agreement. In recognition of this interest, CONTRACTOR shall not assign any right or obligation pursuant to this Agreement without the written consent of the CITY. Any attempted or purported assignment without CITY's written consent shall be void and of no effect.
- 18. Binding Effect.** This Agreement shall be binding on the heirs, executors, administrators, successors and assigns of the parties, subject to the provisions of Section 17, above.
- 19. Use Tax Requirements.** During the performance of this Agreement, CONTRACTOR, for itself, its assignees and successors in interest, agrees as follows:
- A. Use Tax Direct Payment Permit: For all leases and purchases of materials, equipment, supplies, or other tangible personal property used to perform the Agreement and shipped from outside California, the Contractor and any subcontractors leasing or purchasing such materials, equipment, supplies or other tangible personal property shall obtain a Use Tax Direct Payment Permit from the California State Board of Equalization ("SBE") in accordance with the applicable SBE criteria and requirements.
 - B. Sellers Permit: For any construction contract and any construction subcontract in the amount of \$5,000,000 or more, Contractor and the subcontractor(s) shall obtain sellers permits from the SBE and shall register the jobsite as the place of business for the purpose of allocating local sales and use tax to the City. Contractor and its subcontractors shall remit the self-accrued use tax to the SBE, and shall provide a copy of each remittance to the City.
 - C. The above provisions shall apply in all instances unless prohibited by the funding source for the Agreement.

EXHIBIT E

REQUIREMENTS OF THE NON-DISCRIMINATION IN EMPLOYEE BENEFITS CODE

INTRODUCTION

The Sacramento Non-Discrimination In Employee Benefits Code (the "Ordinance"), codified as Sacramento City Code Chapter 3.54, prohibits City contractors from discriminating in the provision of employee benefits between employees with spouses and employees with domestic partners, and between the spouses and domestic partners of employees.

APPLICATION

The provisions of the Ordinance apply to any contract or agreement (as defined below), between a Contractor and the City of Sacramento, in an amount exceeding \$100,000.00. The Ordinance applies to that portion of a contractor's operations that occur: (i) within the City of Sacramento; (ii) on real property outside the City of Sacramento if the property is owned by the City or if the City has a right to occupy the property; or (iii) at any location where a significant amount of work related to a City contract is being performed.

The Ordinance does not apply: to subcontractors or subcontracts of any Contractor or contractors; to transactions entered into pursuant to cooperative purchasing agreements approved by the Sacramento City Council; to legal contracts of other governmental jurisdictions or public agencies without separate competitive bidding by the City; where the requirements of the ordinance will violate or are inconsistent with the terms or conditions of a grant, subvention or agreement with a public agency or the instructions of an authorized representative of any such agency with respect to any such grant, subvention or agreement; to permits for excavation or street construction; or to agreements for the use of City right-of-way where a contracting utility has the power of eminent domain.

DEFINITIONS

As set forth in the Ordinance, the following definitions apply:

"Contract" means an agreement for public works or improvements to be performed, or for goods or services to be purchased or grants to be provided, at the expense of the City or to be paid out of moneys deposited in the treasury or out of the trust money under the control or collected by the City. "Contract" also means a written agreement for the exclusive use ("exclusive use" means the right to use or occupy real property to the exclusion of others, other than the right reserved by the fee owner) or occupancy of real property for a term exceeding 29 days in any calendar year, whether by singular or cumulative instrument, (i) for the operation or use by others of real property owned or controlled by the City for the operation of a business, social, or other establishment or organization, including leases, concessions, franchises and easements, or (ii) for the City's use or occupancy of real property owned by others, including leases, concessions, franchises and easements.

"Contract" shall not include: a revocable at-will use or encroachment permit for the use of or encroachment on City property regardless of the ultimate duration of such permit; excavation, street construction or street use permits; agreements for the use of City right-of-way where a contracting utility has the power of eminent domain; or agreements governing the use of City property that constitute a public forum for activities that are primarily for the purpose of espousing or advocating causes or ideas and that are generally protected by the First Amendment to the United States Constitution or that are primarily recreational in nature.

“Contractor” means any person or persons, firm, partnership, corporation, company, or combination thereof, that enters into a Contract with the City. “Contractor” does not include a public entity.

“Domestic Partner” means any person who has a currently registered domestic partnership with a governmental entity pursuant to state or local law authorizing the registration.

“Employee Benefits” means bereavement leave; disability, life, and other types of insurance; family medical leave; health benefits; membership or membership discounts; moving expenses; pension and retirement benefits; vacation; travel benefits; and any other benefit given to employees. “Employee benefits” shall not include benefits to the extent that the application of the requirements of this chapter to such benefits may be preempted by federal or state.

CONTRACTOR’S OBLIGATION TO PROVIDE THE CITY WITH DOCUMENTATION AND INFORMATION

Contractor shall provide the City with documentation and information verifying its compliance with the requirements of the Ordinance within ten (10) days of receipt of a request from the City. Contractors shall keep accurate payroll records, showing, for each City Contract, the employee’s name, address, Social Security number, work classification, straight time pay rate, overtime pay rate, overtime hours worked, status and exemptions, and benefits for each day and pay period that the employee works on the City Contract. Each request for payroll records shall be accompanied by an affidavit to be completed and returned by the Contractor, as stated, attesting that the information contained in the payroll records is true and correct, and that the Contractor has complied with the requirements of the Ordinance. A violation of the Ordinance or noncompliance with the requirements of the Ordinance shall constitute a breach of contract.

EMPLOYER COMPLIANCE CERTIFICATE AND NOTICE REQUIREMENTS

(a) All contractors seeking a Contract subject to the Ordinance shall submit a completed Declaration of Compliance Form, signed by an authorized representative, with each proposal, bid or application. The Declaration of Compliance shall be made a part of the executed contract, and will be made available for public inspection and copying during regular business hours.

(b) The Contractor shall give each existing employee working directly on a City contract, and (at the time of hire), each new employee, a copy of the notification provided as Attachment “A.”

(c) Contractor shall post, in a place visible to all employees, a copy of the notice provided as Attachment “B.”

Attachment A



YOUR RIGHTS UNDER THE CITY OF SACRAMENTO'S NON-DISCRIMINATION IN EMPLOYEE BENEFITS CODE

On _____ (date), your employer (the "Employer") entered into a contract with the City of Sacramento (the "City") for _____ (contract details), and as a condition of that contract, agreed to abide by the requirements of the City's Non-Discrimination In Employee Benefits Code (Sacramento City Code Section 3.54).

The Ordinance does not require the Employer to provide employee benefits. The Ordinance does require that if certain employee benefits are provided by the Employer, that those benefits be provided without discrimination between employees with spouses and employees with domestic partners, and without discrimination between the spouse or domestic partner of employees.

The Ordinance covers any employee working on the specific contract referenced above, but only for the period of time while those employees are actually working on this specific contract.

The included employee benefits are:

- Bereavement leave
- Disability, life and other types of insurance
- Family medical leave
- Health benefits
- Membership or membership discounts
- Moving expenses
- Pension and retirement benefits
- Vacation
- Travel benefits
- Any other benefits given to employees

(Employee Benefits does not include benefits that may be preempted by federal or state law.)

If you feel you have been discriminated or retaliated against by your employer in the terms and conditions of your application for employment, or in your employment, or in the application of these employee benefits, because of your status as an applicant or as an employee protected by the Ordinance, or because you reported a violation of the Ordinance, and after having exhausted all remedies with your employer,

You May . . .

- Submit a written complaint to the City of Sacramento, Contract Services Unit, containing the details of the alleged violation. The address is:

City of Sacramento
Procurement Services Division
915 I Street, New City Hall, 2nd Floor
Sacramento, CA 95822

- Bring an action in the appropriate division of the Superior Court of the State of California against the Employer and obtain the following remedies:
 - Reinstatement, injunctive relief, compensatory damages and punitive damages
 - Reasonable attorney's fees and costs

Attachment B



YOUR RIGHTS UNDER THE CITY OF SACRAMENTO'S NON-DISCRIMINATION IN EMPLOYEE BENEFITS CODE

If your employer provides employee benefits, they must be provided to those employees working on a City of Sacramento contract without discriminating between employees with spouses and employees with domestic partners.

The included employee benefits are:

- Bereavement leave
- Disability, life and other types of insurance
- Family medical leave
- Health benefits
- Membership or membership discounts
- Moving expenses
- Pension and retirement benefits
- Vacation
- Travel benefits
- Any other benefits given to employees

If you feel you have been discriminated against by your employer . . .

You May . . .

- Submit a written complaint to the City of Sacramento, Contract Services Unit, containing the details of the alleged violation. The address is:

City of Sacramento
Procurement Services Division
915 I Street, New City Hall, 2nd Floor
Sacramento, CA 95814
- Bring an action in the appropriate division of the Superior Court of the State of California against the employer and obtain reinstatement, injunctive relief, compensatory damages, punitive damages and reasonable attorney's fees and costs.

Discrimination and Retaliation Prohibited.

If you feel you have been discriminated or retaliated against by your employer in the terms and conditions of your application for employment, or in your employment, because of your status as an applicant or as an employee protected by the Ordinance, or because you reported a violation of this Ordinance . . .

You May Also . . .

Submit a written complaint to the City of Sacramento, Contract Services Unit, at the same address, containing the details of the alleged violation.

SACRAMENTO MUNICIPAL UTILITY DISTRICT
Customer Advanced Technologies Program
Participation and Monitoring Agreement
TECHNOLOGY: Leak Detection through Isolation and Submetering
Date: July 16, 2013

SMUD Contract Number: _____

THIS AGREEMENT is entered into between the Sacramento Municipal Utility District (SMUD) and The City of Sacramento (OWNER). The purpose and intent of this Agreement is to provide: (1) OWNER with co-funding for a Leak Detection Savings Assessment and (2) SMUD with an opportunity to conduct research and monitor the performance of a Leak Detection Savings Assessment.

1. OWNER will cause to be installed a Leak Detection Savings Assessment on OWNER's facility located at:

Pilot location TBD within City of Sacramento water distribution system

2. SMUD shall reimburse OWNER for the cost of purchasing and installing the Leak Detection Savings Assessment up to the maximum amount set forth herein. Under no circumstances will SMUD's maximum financial obligation under this Agreement exceed the lesser of: (1) \$45,000; or (2) _____ percent (____%) of the cost of purchasing and installing the Leak Detection Savings Assessment.

3. Participation requirements for OWNER are given in Attachment 1 and are included herein by reference. Satisfaction of the requirements in Attachment 1 is a condition precedent to SMUD's funding under Section 2 of this Agreement.

4. OWNER shall allow SMUD to monitor the OWNER's premises for a period not to exceed two years from the date of completion of installation. OWNER authorizes the release of information for installation, data analysis and/or program evaluation, as specified in Attachment 2. SMUD shall provide experienced, competent personnel to place and maintain the monitoring equipment. OWNER grants SMUD access upon reasonable notice: (a) to install said monitoring equipment; (b) in the event of an emergency or equipment malfunction to replace or repair said equipment; and (c) as needed to maintain the monitoring equipment and retrieve data. Access will be during normal SMUD business hours except in an emergency. The failure by OWNER or its assignee to provide access for monitoring as provided herein shall be considered a material breach of contract. SMUD's remedy shall include reimbursement of all of SMUD's costs incurred under this Agreement.

5. This Agreement will be effective as of the last date of signature below. This Agreement will automatically terminate if OWNER fails to complete the installation of the Leak Detection Savings Assessment by **March 31, 2015** and SMUD's payment obligation under Section 2 shall also terminate. After the installation of the Leak Detection Savings Assessment, this Agreement will remain in effect for two years or until **March 31, 2017**, whichever is earlier or unless otherwise agreed upon by the parties.

6. SMUD's contact for this Agreement is SMUD's Contract Manager.

7. The following SMUD administrative data pertain to this Agreement:

Contract Manager:	Kathleen Ave	(916) 732-5302
Charge Costs To:	G/L 550030	
Work Order #:	20040754	

8. Except as otherwise provided herein, all written communications or notices under or regarding this Agreement shall be directed as follows:

SMUD: Sacramento Municipal Utility District
P.O. Box 15830, MS-B257
Sacramento, CA 95852-1830
Attention: Kathleen Ave
Phone Number: (916) 732-5302

Name of OWNER: City of Sacramento

OWNER's Address: _____

Phone number: (916)808-7898

Federal Tax Id Or Social Security #: _____

OWNER's Project Manager: Julie Friedman

Project Manager's Phone Number: (916)808-7898

9. a. To receive payment from SMUD, OWNER must submit a Request For Payment to:

Sacramento Municipal Utility District
P.O. Box 15830, MS-B257
Sacramento, CA 95852-1830
Attention: Kathleen Ave

b. Upon notice of completion of installation, SMUD shall inspect the installation within twenty (20) days of such notice. Any SMUD inspection shall be for the sole purpose of verifying that the installation is in conformance with the provisions of this Agreement. SMUD's inspection shall not in any way discharge OWNER of its responsibility to seek and obtain appropriate federal, state or local permits or approval as required by law.

c. Any Request For Payment to SMUD from OWNER shall include: (1) documentation verifying relevant costs and expenses as reasonably required by SMUD; and (2) a statement identifying those costs to be covered by SMUD. OWNER shall invoice SMUD in the following manner: upon completion of installation, OWNER may invoice SMUD for SMUD's obligation hereunder.

d. OWNER shall be solely responsible for the payment of any income taxes levied by Federal or State law against OWNER and associated with this Agreement.

10. SMUD may terminate this Agreement upon thirty (30) days advance notice in writing to OWNER. In such event, OWNER shall use all reasonable efforts to mitigate SMUD's financial obligations under this Agreement. Should SMUD terminate this Agreement, SMUD shall pay OWNER for SMUD's agreed upon share of all costs incurred up to the point of termination, up to SMUD's maximum financial obligation as set forth in Section 2. Said termination payment shall be OWNER's sole and exclusive remedy for SMUD's termination or material breach hereunder.

11. Except where OWNER uses its own workforce to perform the installation, OWNER shall ensure that the installing contractor holds a current contractor's license, valid for the State of California and appropriate for the work to be performed. OWNER shall ensure that the contractor complies with all applicable federal, state and local laws, ordinances and regulations, including without limitation, permitting requirements.

12. OWNER shall ensure that all work performed under this Agreement or related to this Agreement, whether performed by OWNER or any third party, fully complies with all federal, state or local laws, statutes, regulations and ordinance regarding the generation, use, storage, handling, transportation and disposal of Hazardous Materials. For purposes of this Agreement, Hazardous Materials shall include, without limitation, substances defined or classified as "hazardous substances", "hazardous materials", hazardous waste" or "toxic substances" under any federal, state or local law, statute, regulation or ordinance in effect or which shall come into effect during the term of this Agreement.

13. OWNER is advised that asbestos and lead-containing materials may be classified as Hazardous Materials.

14. SMUD makes no representations as to the reliability, efficiency, sizing or performance of the Leak Detection Savings Assessment, or any other aspect of the Leak Detection Savings Assessment.

15. SMUD MAKES NO WARRANTIES, IMPLIED OR EXPRESSED WITH RESPECT TO GOODS AND SERVICES PROVIDED UNDER THIS AGREEMENT INCLUDING, BUT NOT LIMITED TO, THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

16. OWNER and SMUD, including their directors, officers, agents, and employees respectively, as indemnitor, will indemnify, defend, and hold harmless the other, as indemnitee, against all claims, loss, damage, expense and liability asserted or incurred by other parties, including but not limited to employees of either party hereto, arising out of or in any way connected with the performance of this contract, to the extent that such loss, damage or liability is caused by the negligence or willful misconduct of the indemnitor, its directors, officers, agents or employees. It is the intent of the parties hereto that, where negligence is determined to have been contributory, principles of comparative negligence will be followed and each party shall bear the proportionate cost of any loss, damage, expense and liability attributable to that party's negligence.

17. OWNER shall not assign this Agreement without the written consent of SMUD.

18. In the interpretation of this Agreement, any inconsistencies between the terms and any exhibits shall be resolved in favor of the terms.

19. The rights and obligations of the parties arising out of this Agreement shall be governed in all respects by the laws of the state of California.

20. The waiver by either party of any breach or any term, covenant, condition or agreement contained herein or any default in the performance of any obligations hereunder shall not be deemed to be a waiver of any other breach or default of the same or any other term, covenant, condition, agreement or obligation.

21. If either party brings any actions or proceedings to enforce, protect or establish any right or remedy or to interpret this Agreement, the prevailing party shall be entitled to recover reasonable attorney's fees.

22. In this Agreement, whenever the consent or approval of a party is required to an act of the other party, such consent shall not be unreasonably withheld, delayed or conditioned.

23. This Agreement constitutes the entire understanding between the parties as to the subject matter. Any amendments, changes, alterations or modifications to this Agreement shall require the agreement of both parties and shall not be effective until incorporated into a written amendment to this Agreement, which shall be signed by both parties.

24. Each individual executing this Agreement on behalf of a party represents and warrants that he or she is duly authorized to execute and deliver this Agreement on behalf of said party.

IN WITNESS THEREOF, SMUD and OWNER hereby agree to the terms set forth in this Agreement.

OWNER AUTHORIZATION

Signature: _____ Date: _____

Printed Name: _____

Title: _____

SMUD AUTHORIZATION

Signature: _____ Date: _____

Printed Name: Obadiah Bartholomy

Title: Senior Project Manager, Energy Research and Development

ATTACHMENT 1

REQUIREMENTS FOR PARTICIPATION

1. OWNER is responsible for the selection, management and payment of the installing contractor.
2. To participate, OWNER must:
 - a. Comply with the following Program Requirements (stated in the Demonstration Project proposal request package)
 - i. Projects must be implemented within SMUD's service territory
 - ii. Host agencies must provide at least a 50% match to grant funding and shall enter into a Customer Advanced Technologies Program Participation and Monitoring Agreement with SMUD to govern the execution of the project and reimbursement of grant funds (agreement details may depend on the type of project proposed).
 - iii. Provide a list of key milestones for project completion, with construction concluding no later than March 31, 2015
 - iv. Provide quarterly progress reports in bulleted format for the duration of the project, due by the 5th of designated months. One to two paragraphs in length is sufficient, unless significant complications arise which require the adjustment of milestones and a more detailed explanation. Short verbal progress reports will be requested weekly or semimonthly.
 - v. Submit one summary invoice to SMUD following the completion of construction for the full grant amount, with proof of total project expenditure and detailed backup documentation including receipts, project personnel timesheets, and equipment lists.
 - vi. Provide digital copies of photographs of project construction in progress and final installation, if appropriate
 - vii. Provide examples of materials published with grant funds, if appropriate
 - viii. Prepare and submit a final project fact sheet, summarizing project objectives, scope, timeline, key findings and results (GHG emissions reductions, energy and/or water savings realized and/or projected).
 - ix. Grant funds shall not be approved to fund staff travel or training.
 - b. Submit **two** completed, signed and dated copies of this Agreement to:

SMUD
P.O. Box 15830, MS-B257
Sacramento, CA 95852-1830
Attention: Kathleen Ave
Phone Number: (916) 732-5302
 - c. Provide a description of product(s) to be used. This must include (1) the manufacturer's name; (2) the names of the product(s) that will be used; and (3) a brief description of the product(s).
 - d. Provide a copy of the manufacturer's warranty. **All labor, workmanship, materials and equipment must be covered under warranty for at least one year.**

**ATTACHMENT 2
CONFIDENTIAL INFORMATION**

Parties Receiving Information	Items of Information (include any information considered Confidential, if applicable)
<input type="checkbox"/> List if applicable	a.
<input type="checkbox"/> List if applicable	a.

RESOLUTION NO.

Adopted by the Sacramento City Council

AUTHORIZING AGREEMENTS RELATED TO WATER LOSS CONTROL AND RELATED BUDGET ACTION

BACKGROUND

- A. City, regional, and state-wide stakeholders have identified the importance of expanding the City's Water Loss Control Program.
- B. District Metered Area (DMA) Management and leak detection through isolation and submetering can reduce the volume of real water losses, saving water and energy, and reducing greenhouse gas emissions. DMAs are discrete areas of the water distribution system that have a defined boundary encompassing 500-5,000 metered service connections.
- C. The City of Sacramento Water Conservation Plan adopted by City Council in October 2013 includes a recommendation to intensify the system-wide leak detection program to help achieve the 20 percent per capita water use reduction by 2020 mandated by the 2009 Water Conservation Act.
- D. A DMA Pilot Study will augment the Department of Utility's (DOU's) leak detection and repair program. A Request for Qualifications (RFQ) to perform this study was issued on May 20, 2014, and three firms submitted Statements of Qualifications (SOQs): Black & Veatch, Water Systems Optimization, Inc., and Psomas. The City selection panel evaluated the SOQs submitted and determined Water Systems Optimization, Inc. to be the top-ranked firm to provide these services.
- E. City staff also is recommending approval of a grant agreement with the Sacramento Municipal Utility District (SMUD) that will allow the City to receive \$45,000 for leak detection through isolation and submetering. SMUD has a 50 percent match requirement of \$45,000 for a total grant project budget of \$90,000.
- F. There are sufficient funds (Fund 6005) in the Water Conservation Program (114120400) for the City match. An additional \$90,000 (Fund 6005) transferred from operations to the Program (114120400) will be necessary to provide sufficient resources for the DMA Pilot Study.

BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:

- Section 1. The City Manager or the City Manager's designee is authorized to execute SMUD's Advanced Technologies Program Participation and Monitoring Agreement to utilize funding awarded through the Regional Water and Energy Assessment Program in the amount of \$45,000 for Leak Detection through Isolation and Submetering.
- Section 2: The City Manager or the City Manager's designee is authorized to amend the revenue and expenditure budgets in the Water Conservation Program (I14120400) for the grant amount of \$45,000 (Fund 6205) and for the transfer of \$90,000 from the Water Distribution's operating budget (Fund 6005) to the Program (I14120400).
- Section 3. The City Manager or the City Manager's designee is authorized to enter into a Professional Services Agreement With Water Systems Optimization, Inc. for a District Metered Area Pilot Study for Water Loss Control in the amount of \$169,833.
- Section 4. Exhibits A and B are made a part of this Resolution.

Table of Contents:

Exhibit A: Grant Agreement between SMUD and City

Exhibit B: Professional Services Agreement between Water Systems Optimization and City