REPORT TO COUNCIL
City of Sacramento

915 I Street, Sacramento, CA 95814-2604
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Staff Report
July 21, 2009

Honorable Mayor and
Members of the City Council

Title: Contracts: Water Meter Reading Automation System

Location/Council District: Citywide

Recommendation: Adopt a **Resolution:** 1) authorizing the City Manager to sign a) a Professional Services Agreement with Ferguson Waterworks for software installation and training services, for a one year term in a total amount not to exceed $35,000, b) a Professional Services Agreement with Datamatic, LTD for web hosting services, for a two year term in a total amount not to exceed $30,000, and c) a Software License and Maintenance Agreement with Datamatic, LTD, for a five year term in a total amount not to exceed $96,000; 2) suspending competitive bidding, in the best interests of the City, for the purchase of the hardware and equipment for the Water Meter Reading Automation System; and 3) awarding a purchase contract for such hardware and equipment to Ferguson Waterworks, for a five year term in a total amount not to exceed $6,519,000.

Contact: Michael Malone, Field Services Manager, 808-6226; Thanh Vo, System Support Manager, 808-7988; Elsie Fong, Program Specialist, 808-40

Presenters: Michael Malone, Field Services Manager

Department: Utilities

Division: Field Services

Organization No: 14001411

Description/Analysis

Issue: California State Assembly Bill 2572 (AB 2572) requires the installation of water meters on all water service connections not later than 2025. To comply with AB 2572, the Department of Utilities (DOU) has begun a Meter Retrofit Program, which includes residential water meter installation. Additionally, the program includes the application of advanced metering communications technology for electronically collecting meter readings and additional data. The DOU requests approval of contracts necessary to purchase implementation services, software and hardware to install and operate a state-of-the-art Water Meter Reading Automation (WMRA) solution to completely automate its water

ATTACHMENT 1

RFP RESULTS - RFP NUMBER P081312006

Items	Itron	Ferguson* Waterworks	Johnson Enterprises	Badger Meters	Measurement Control System
Technology	**1.5-way Communication**	**2-way Communication**	1-way Communication	1-way Communication	1-way Communication
Solution	Fixed network only	Walk, Mobile & Fixed network	Fixed network only	Mobile only	Fixed network only
Hardware					
▪ Endpoint	$15,121,728	$13,720,000	$12,600,000	Incomplete	$14,000,000
▪ Data Collector	$1,639,092	**No charge**	$642,600	**None**	$625,475
▪ Mobile System	**None**	**$23,995**	**None**	Incomplete	**None**
▪ Handheld	$69,020	$27,800	$20,000	Incomplete	$10,500
Software	$197,939	$30,000	$85,650	Incomplete	$18,500
Implementation	$2,340,000	$9,200	$94,500	Incomplete	$156,000
Training	$19,760	$24,000	$18,200	Incomplete	$2,500
Travel Costs	$458,500	**No charge**	**Included**	Incomplete	**No charge**
10 years Maintenance Fees	$1,517,409	$401,088	$750,000	Incomplete	$81,000
Sub-total	$20,363,448	$14,236,083	$14,210,950	Incomplete	$14,893,870
Hardware Discount					
▪ Free Splice Kits (3,000 X $4.5/ea)	**None**	**<$13,500>**	**None**	**None**	**None**
▪ Free Lid locks (30,000 X $2.5/ea)	**None**	**<$75,000>**	**None**	**None**	**None**
Total RFP Evaluation	$20,363,448	**$14,147,583**	$14,210,950	**Unresponsive**	$14,893,975

***Selected proposal:**
Ferguson Waterworks
8732 Fruitridge Road
Sacramento, CA 95826

Using Department: Utilities, Field Services

No. of E/SBE Bids Solicited	No. of E/SBE Responses	Award to E/SBE Vendor?
1	1	No

meter reading processes.

Policy Considerations: The recommendations in this report for approval of the various service agreements are in accordance with the provisions of City Code Chapter 3.64, governing agreements for professional services. The actions recommended in this report also include award of a contract for purchase of the hardware and equipment necessary to install and operate the WMRA system. The proposed hardware and equipment is part of the proposal submitted for the WMRA solution by Ferguson Waterworks, that was selected as the best solution through the City's RFP and Proof of Concept process. However, because this purchase contract was not separately competitively bid, it is necessary for the City Council to suspend competitive bidding prior to awarding the contract, pursuant to City Code Section 3.56.230, which permits the City Council to suspend competitive bidding if the Council determines that it is in the City's best interest to do so. Staff believes that it is in the best interest of the City to suspend competitive biding for the purchase of the hardware and equipment necessary to install and operate the WMRA system because:

- The Ferguson Waterworks proposal that includes this hardware and equipment went through a rigorous evaluation process that selected this proposal as the most responsive and cost-effective solution that best meets the City's needs for an automated water meter reading system, as discussed more fully later in this report.
- The MOSAIC fixed network software necessary to implement the selected WMRA solution requires use of the proprietary hardware and equipment being purchased from Ferguson Waterworks, so this purchase is necessary to implement the preferred WMRA solution.

Environmental Considerations:

California Environmental Quality Act. The Office of Environmental Planning services has reviewed the proposed project and determined that the current proposal involves the buying of professional services, hardware, and equipment in order to automate the reading of water meters. The proposal is not a 'project' in accordance with Section 15378 of the California Environmental Quality Act Guidelines. The proposal does not have a potential for resulting in either direct or indirect physical changes in the environment. Therefore, as determined by the City's Environmental Services Planning Manager, no environmental review is necessary.

Sustainability Considerations: The implementation of the WMRA solution together with the on-going installation of water meters promotes sustainability by allowing the City to collect meter reads accurately and bill based on water usage, thereby providing incentives for City customers to use water more efficiently and enabling the City to enforce water conservation programs much easier.

Commission/Committee Action: Not applicable

Rationale for Recommendation: On February 19, 2008, the DOU Field Services and Engineering Divisions, in conjunction with the Department of General Services (DGS) - Procurement Services Division, issued Request for Proposal number P081312006 for the purchase of implementation services, software and hardware to install a hybrid WMRA solution supporting a Drive-By and fully automated Fixed Network Water Meter Reading system. Five proposals were received. The proposal results are provided in Attachment 1. City staff completed two (2) evaluation processes, including site visits to three (3) proposers' customers. In a further effort to ensure the proposed solution meets the City's requirements, DOU staff also tested two of the proposed solutions for a 3 month Proof of Concept period.

At the conclusion of the proposal evaluation and Proof of Concept periods, City staff selected Ferguson Waterworks' proposal as the most responsive and cost-effective proposal that best met the City's requirements for a two-way communication solution. Ferguson Waterworks proposes a Hybrid solution, which enables the City to retrofit the remaining residential meters at the City's own pace. This solution offers the City much more flexibility in its deployment options, allowing the City to migrate from a mobile system to a fixed network without a system change out. This type of flexibility does not require large up-front investments in infrastructure, and allows the City to invest as we go. In addition, Ferguson Waterworks' solution is more advanced than the other four proposals/solutions submitted, further securing the City's investment towards the future.

Financial Considerations: The various contracts constituting the recommended WMRA solution are as follows:

a) One year contract with Ferguson Waterworks for software installation and training services, in a total amount not to exceed $35,000. This contract will be charged to the CIP Z14009300 budget.

b) Two year contract with Datamatic, LTD for web hosting services related to the WMRA solution in a total amount not to exceed $30,000. This contract will be charged to the Field Services Division operating budgets. Fund 6005 has sufficient funds for these purchases during the current fiscal year. The estimated annual purchases under this contract are as follows:

Year 1:	$12,000.00
Year 2:	$18,000.00

c) Five year contract with Datamatic, LTD. for the MOSAIC software license and maintenance support, in a total amount not to exceed $96,000. This contract will be charged to the CIP Z14009300 budget. The estimated annual expenditures under this contract are as follows:

Year 1:	$0
Year 2:	$11,000
Year 3:	$43,000
Year 4:	$20,000
Year 5:	$22,000

d) The total cost for purchase of the hardware and equipment required to implement the WMRA solution to cover the whole City (140,000 connections) is approximately $13,772,000. For the next five years, DOU needs to replace about 25,000 obsolete endpoints from the existing Mobile system and installs approximately 40,000 new meters. Therefore, staff recommends a five year contract with Ferguson Waterworks for purchase of the hardware and equipment required to implement Phase I of the WMRA solution, in a total amount not to exceed $6,519,000. In year 5 staff will submit a contract amendment for the next Phase(s). This contract will be charged to the CIP Z14009300, Z14010011, Z14010014, Z14010015, and Z14010017 budgets. The estimated annual purchases under this contract are as follows:

Year 1:	$2,012,000
Year 2:	$1,226,000
Year 3:	$1,226,000
Year 4:	$1,258,000
Year 5:	$797,000

Emerging Small Business Development (ESBD): Among the five proposals submitted, one was certified as an ESBD; however, the vendor was not selected because its proposal was not responsive to the proposal requirements.

Respectfully Submitted by: Michael Malone
Michael Malone
Field Services Manager

Approved by: Marty Hanneman
Marty Hanneman
ACM/Director of Utilities

Recommendation Approved:

Ray Kerridge
City Manager

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ATTACHMENT 2

BACKGROUND

As part of the ongoing effort to meet the meter retrofit mandate of AB 2572, and to provide Sacramento water customers accurate meter readings, minimize operating costs, and avoid obstacles and unsafe conditions such as locked gates and aggressive pets threatening meter readers, the Department of Utilities (DOU) has been exploring Automated Meter Reading Infrastructures. A Water Meter Reading Automation (WMRA) system would enable the DOU to collect meter readings electronically, as well as additional data such as water leak and tamper alerts, which could then be transmitted to its back office for electronic storage. Automated meter reading devices can also capture interval data and log meter events that can be used for water usage profiling, demand forecasting, demand response, rate of flow recording, flow monitoring, time of use billing, and water conservation enforcement. In addition, the automatic meter reading software would integrate with the City's Customer Information System for customer billing.

In an effort to find a best solution for the City, DOU and Information Technology (IT) staff conducted research on various smart water meter technologies and completed a Cost and Benefit Analysis. Results from these studies showed that the City's existing ORION Mobile system is costlier to operate than a WMRA solution based on a Wireless Fixed Network. In addition, the City cannot use the current ORION Mobile system to enforce water conservation programs effectively. With near real-time meter reading, long battery life and a wireless fixed network system the WMRA reduces human involvement to a minimum. It provides a very reliable and more accurate meter reads collection. This solution not only eliminates errors but saves money as well. For these reasons, staff determined that a wireless fixed network WMRA solution is best for the City's water system. DOU and IT staff subsequently coordinated with DGS Procurement Services Division and issued a Request for Proposals (RFP # P081312006), seeking solutions from experienced, qualified vendors and implementation services companies that specialize in supplying and implementing fully automated water meter reading systems to local governments, municipalities, and/or private entities with similar project scope and size as the City.

On March 26, 2008, staff received five (5) proposals for the Sacramento Water Meter Reading Automation (WMRA) project. An evaluation team of eight staff members from DOU Field Services Division, Customer Services, Engineering, Water Conservation and Meter Readers Groups completed two (2) evaluation processes, including site visits to three (3) customers from proposers. The evaluation team selected two proposers for trial operations through Proof of Concepts that started on August 25th 2008 and completed on December 5th 2008.

At the conclusion of the proposal evaluation and Proof of Concept periods, City staff selected Ferguson Waterworks' proposal as the most responsive and cost-effective proposal that best meets the City's requirements for a two-way communication solution.

ATTACHMENT 3

RESOLUTION NO. 2009-XXXX

Adopted by the Sacramento City Council

July 21, 2009

AWARD CONTRACTS FOR WATER METER READING AUTOMATION SYSTEM

BACKGROUND:

A. On February 19, 2008, the Department of Utilities (DOU), in conjunction with the Department of General Services (DGS) - Procurement Services Division, issued a Request for Proposals for the implementation services, software and hardware required to install a hybrid Water Meter Reading Automation (WMRA) solution supporting a Drive-By and fully automated Fixed Network Water Meter Reading system. Five proposals were received.

B. In addition to the proposal evaluation process, that included site visits to three proposers' customers, City staff also tested two of the proposed solutions on a trial basis for a 3 month Proof of Concept period. At the conclusion of the proposal evaluation and Proof of Concept periods, Ferguson Waterworks' proposal was selected as the most responsive and cost-effective proposal that best meets the City's requirements for a two-way communication solution.

C. Implementation of Ferguson Waterworks' WMRA solution requires approval of two professional service agreements, a software license and maintenance agreement, and a purchase contract for the hardware and equipment necessary to install and operate the WMRA system. Because this purchase contract was not separately competitively bid, it is necessary for the City Council to suspend competitive bidding prior to awarding the contract, pursuant to City Code Section 3.56.230, which permits the City Council to suspend competitive bidding for the purchase of supplies if the Council determines that it is in the City's best interest to do so.

D. It is in the best interest of the City to suspend competitive biding for the purchase of the hardware and equipment necessary to install and operate the WMRA system because (1) the Ferguson Waterworks proposal that includes this hardware and equipment went through a rigorous evaluation process that selected this proposal as the most responsive and cost-effective solution that best meets the City's needs for an automated water meter reading system, and (2) the MOSAIC fixed network software necessary to implement the selected WMRA solution requires use of the proprietary hardware and equipment being purchased from Ferguson Waterworks, so this purchase is necessary to implement the preferred WMRA solution.

E. The total cost for purchase of the hardware and equipment required to implement the WMRA solution to cover the whole City (140,000 connections) is approximately $13,772,000. For the next five years, DOU needs to replace about 25,000 obsolete endpoints from the existing Mobile system and installs approximately 40,000 new meters. Therefore, staff recommends a five year contract with Ferguson Waterworks for purchase of the hardware and equipment required to implement Phase I of the WMRA solution, in a total amount not to exceed $6,519,000. In year 5 staff will submit a contract amendment for the next Phase(s).

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

Section 1. The City Manager is authorized to sign a Professional Services Agreement with Ferguson Waterworks for software installation and training services, for a one year term in a total amount not to exceed $35,000. This contract will be charged to the Water Meter Reading Project (Z14009300).

Section 2. The City Manager is authorized to sign a Professional Services Agreement with Datamatic, LTD for web hosting services, for a two year term in a total amount not to exceed $30,000. This contract will be charged to the Field Services Division operating budget.

Section 3. The City Manager is authorized to sign a Software License and Maintenance Agreement with Datamatic, LTD., for a five year term in a total amount not to exceed $96,000. This contract will be charged to the Water Meter Reading Project (Z14009300).

Section 4. In the best interests of the City, competitive bidding is suspended for the purchase of the hardware and equipment for the Water Meter Reading Automation System.

Section 5. A purchase contract for the hardware and equipment for the Water Meter Reading Automation System is awarded to Ferguson Waterworks, for a five year term in a total amount not to exceed $6,519,000. This contract will be charged to the Water Meter Reading Projects (Z14009300, Z14010011, Z14010014, Z14010015 and Z14010017).