



Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Maria Öberg Jeff Provenzano Jim Shannon

4/24/2025

SUBJECT: See Below

DATE: April 14, 2025

Date:

Approved > Magune

COUNCIL DISTRICTS: 2, 4, 7, 8

SUBJECT: Report on Request for Proposals for an Advanced Metering Infrastructure Solution

RECOMMENDATION

(a) Adopt a resolution authorizing the City Manager or her designee to:

- (1) Negotiate and execute an agreement with Badger Meter, Inc. (Milwaukee, WI) for equipment, including water-metering products, related accessories, software, related professional services such as pre-installation surveys, installation, training, public outreach, provisioning of a cellular-based network, and maintenance and support for an advanced metering infrastructure (AMI) solution (collectively, AMI Solution) for the Environmental Services Department of the City of San José (City), with an initial three-year term beginning on or about May 26, 2025, and ending on or about May 25, 2028, or as may be adjusted to align with the renewal term, with a maximum compensation not to exceed \$21,322,261, subject to the appropriation of funds;
- (2) Approve a contingency of \$2,132,226 for unanticipated costs;
- (3) Negotiate and execute amendments and/or change orders related to unanticipated changes in the AMI business reengineering process and related services, subject to the appropriation of funds; and
- (4) Exercise up to four five-year options to extend the term of the agreement for a maximum term of 23 years through May 25, 2048, subject to the appropriation of funds.
- (b) Adopt the following 2024-2025 Appropriation Ordinance amendments in the Water Utility Capital Fund:
 - (1) Increase the Advanced Metering Infrastructure Implementation appropriation to the Environmental Services Department by \$1,500,000; and
 - (2) Decrease the Unrestricted Ending Fund Balance by \$1,500,000.

SUMMARY AND OUTCOME

Authorizing the City Manager or her designee to take these actions will enable the Environmental Services Department (ESD) to transition approximately 27,000 water meters and ancillary equipment from the current automated meter reading (AMR) technology to the new AMI Solution, thus aiding water conservation and improving operational efficiencies and customer service, while addressing several recommendations contained in the City Auditor's October 2021 report, "Municipal Water Billing and Customer Service: The City Can Take Steps to Enhance Customer Service During an Unprecedented Time," and assisting in compliance with California's new water conservation regulations.

BACKGROUND

The San José Municipal Water System (SJMWS) provides drinking water to portions of the City across four major service areas: North San José/Alviso, Evergreen, Edenvale, and Coyote Valley. SJMWS is one of three retail water suppliers in the City, providing potable and recycled water service to 27,000 metered connections with a service population of approximately 143,000 residents, or roughly 14% of the City's population. As a critical utility within Silicon Valley, SJMWS is committed to delivering reliable, efficient, and sustainable water services to meet current and future demands.

Water supply challenges, including climate variability, droughts, and population growth, contribute to stress on water resource availability. Most of SJMWS' water supply comes from imported water purchased from two wholesale agencies: the San Francisco Public Utilities Commission and Valley Water (formerly, Santa Clara Valley Water District). In the case of Valley Water, a portion of its water supply comes from the San Francisco Bay Delta, via the Federal Central Valley Project, which is subject to increasingly stringent regulation and has been the focus of efforts by state and federal agencies to reduce water exports. Additionally, SJMWS will need to comply with California's new state regulations on water conservation. The new regulatory framework, "Making Conservation a California Way of Life," includes standards-based budgets for efficient use of water in each sector, including indoor and outdoor residential, commercial, and industrial uses, as well as distribution system water loss.

From the inception of the water system in approximately 1961, the primary mode of meter reading was manual reading of water meters, in which staff walked around each neighborhood, located water meters, opened their lids, and manually documented the numbers on the dials. In approximately 2004, SJMWS began to transition from manual meter reading to the current AMR system, which involves collecting meter reads by driving around the service area with a handheld device that collects meter reads from transmitters connected to water meters.

SJMWS began installing AMR meters in 2004, and meters continued to be replaced with AMR technology-based meters through 2017. The AMR meters were installed piecemeal over time as meters failed or needed to be replaced, and there was no comprehensive plan for an upfront full-scale meter replacement over a short duration. While AMR is an improvement over manual meter reading, the more recent AMI Solution will provide additional significant benefits to enhance water conservation efforts, improve customer service, reduce water loss, and improve operational efficiency.

In order to gauge the effectiveness and suitability of AMI technology for SJMWS, a pilot project was conducted during 2020 and 2021. The AMI pilot tested the implementation of three different AMI technologies at 300 meter locations over a one-year period, with the goal of providing utility experience of the different technologies while collecting the information necessary to determine which technology was best suited for SJMWS.

In 2021, SJMWS obtained consultant support to evaluate the pilot, assess AMI operational impacts, evaluate technology and support needs, conduct a financial analysis, and provide a recommendation of the best-fit AMI technology for SJMWS. The consultant also provided support to develop a scope of work and estimated budget to implement the recommended cellular-based AMI Solution.

In October 2021, the City Auditor's Office finalized a report entitled "Municipal Water Billing and Customer Service: The City Can Take Steps to Enhance Customer Service During an Unprecedented Time." The audit referenced ESD's then-ongoing pilot of AMI technologies, including staff's uncertainty about when AMI could be implemented.

City Council's subsequent acceptance of the audit report included a directive for ESD to integrate funding for AMI build-out in the five-year capital plan and to deploy AMI to all water service connections. Further, several of the outstanding audit response items are expected to be resolved by the implementation of both the AMI Solution and the ongoing upgrade of the customer information and billing system, both of which are estimated to be completed during 2027.

The resulting AMI Solution implementation scope involves a full replacement of all water meters in the SJMWS system as well as replacement of the existing drive-by meter-reading technology, AMR, resulting in a transition to the new AMI technology. The new AMI Solution will include new water meters, cellular AMI devices (endpoints), and data management software to monitor water usage. The AMI implementation will replace the entire water meter inventory over a three-year implementation period consisting of two phases: an initial deployment phase spanning a controlled subset of the service area and a full deployment phase encompassing the entire service area.

The AMI Solution will enable the following:

- Near real-time monitoring of water usage for customers and utility operators;
- Automatic leak detection and alerts;
- Enhanced data for reporting on water conservation and regulatory compliance (including California's Making Conservation a California Way of Life framework);
- Increased ability to identify, monitor, and decrease distribution system water loss; and
- Increased visibility via a customer engagement portal that will allow customers to view their water use in intervals of time, customize alerts and other information, and receive monthly water reports utilizing social comparisons to similar households.

The AMI Solution will generate significant benefits, including:

- <u>Water Savings</u>: Water will be saved through both leak detection and repair, as well as through customer behavioral change. The new interval-based water data provided by the AMI Solution will enable increased capabilities for reducing water consumption and will help support the City's long-term water sustainability goals. Water savings will also be enabled through enhanced abilities to reduce distribution system water losses.
- <u>Regulatory Compliance</u>: The AMI Solution will facilitate compliance with the Making Conservation a California Way of Life framework, which sets individualized efficiency goals for urban retail water suppliers. The AMI Solution will allow for improved targeting of water budgets and conservation programs to different customer groups.
- Operational Efficiency: The AMI Solution will eliminate the need for drive-by meter reading, leading to operational cost savings associated with meter reading. The reduction in vehicle trips for meter reading will result in decreased greenhouse gas emissions as well as improved safety for workers and customers. It will also allow SJMWS to respond more quickly to issues, thereby increasing service responsiveness and system reliability. Additionally, a significant proportion of existing meters are nearing end of life and will need to be replaced in the coming years regardless of whether the AMI Solution is deployed; taking the opportunity to replace aging meter inventory with newer technology allows for more efficient use of required funding and a more comprehensive rollout of the additional capabilities that the AMI Solution provides.
- <u>Customer Engagement</u>: Customers will have access to view their water usage via a customer engagement portal, helping them make informed decisions to monitor and reduce their water use and bills. The portal will provide near real-time water use information, conservation tips and information, leak alerts, and other utility notifications.

- <u>Energy Savings</u>: All of SJMWS's water distribution and groundwater pumping operations utilize 100% renewable energy. The implementation of the AMI Solution, which will result in the replacement of 27,000 water meters, is projected to reduce annual electricity consumption by 403,060 kWh. Furthermore, the elimination of vehicle meter reading operations is projected to reduce the associated carbon footprint by an equivalent of 2.8 metric tons of greenhouse gas emissions annually.
- <u>Drought Resiliency</u>: California experiences frequent occurrences of drought, and the AMI Solution will greatly help SJMWS and customers to respond to the next drought. The customer engagement portal will not only enable leak detection but also the ability to display customers' water budgets or allotments, which could be used during a future drought. The customer engagement portal can utilize the interval-based water use data to show how customers are doing during a billing period against the allotment, and the likelihood that a customer would end up over or under budget. Additionally, accurate and timely monitoring of water use will allow the utility to monitor total water usage and identify when additional drought mitigation measures are necessary.
- <u>Reduced Imported Water Reliance</u>: The significant water savings that will result from this project will mean less water purchased from two water wholesalers. Wholesale water supplies are purchased from the San Francisco Public Utilities Commission's Regional Water System and from Valley Water. Both wholesale agencies supply water that is imported to the county. Thus, water saved in the SJMWS service area directly translates into reduced water coming from these sources.

ANALYSIS

In May 2024, the Finance Department released a request for proposals for an AMI Solution to address several open audit recommendations¹ contained in the City Auditor's October 2021 report, "Municipal Water Billing and Customer Service: The City Can Take Steps to Enhance Customer Service During an Unprecedented Time."²

One proposal was received from Badger Meter, Inc. prior to the submittal deadline.

Responsive Proposal: The Department of Public Works' Office of Equality Assurance Division reviewed the firm which submitted the sole proposal in response to the City's request for proposals, including its subcontractor, for compliance with the City's Wage Theft Policy and found no evidence of non-compliance based on records maintained by the California Labor Commissioner's Office. This firm's proposal was deemed responsive after checks carried out by the Finance Department and the Office of Equality Assurance and considered for further evaluation.

¹ https://www.sanjoseca.gov/home/showpublisheddocument/114417/638622626825000000

² https://www.sanjoseca.gov/home/showpublisheddocument/78861

Evaluation Process: A four-member evaluation panel consisting of representatives from ESD independently evaluated the proposal received from Badger Meter, Inc. (Milwaukee, WI).

Following the initial evaluation, the sole proposer was invited to participate in an oral interview, following which the proposer participated in a best and final offer process to provide clarifications and final pricing.

Staff conducted reference checks and all references provided positive feedback.

In accordance with City Administrative Policy Manual 1.7.6, Information and Systems Security Policy, a security review was conducted by the City's Information Technology Department as part of the purchasing process for the sole proposer.

Local and Small Business Enterprise Preferences: In accordance with City of San José Municipal Code, Section 4.12.320, 10% of the total evaluation points were reserved for the local and small business preferences. The sole proposer neither requested nor received the local and small business enterprise preferences.

Protests: No protests were received during the ten-day protest period.

Award Recommendation: Staff recommends award of contract to Badger Meter, Inc.

The agreement resulting from this solicitation will be subject to the City's Prevailing/ Living Wage Policy.

EVALUATION AND FOLLOW-UP

No additional follow-up action with City Council is expected at this time in relation to the AMI project implementation; however, as AMI is referenced in the above-mentioned City Auditor's Office report, updates on the audit findings that relate to the implementation of the AMI Solution will be included in future audit report updates.

COST SUMMARY/IMPLICATIONS

The estimated not-to-exceed cost of \$23,454,487 for the initial three-year term of the agreement consists of a contract amount of \$21,322,261 and a contingency of \$2,132,226. A total of \$545,513 is available for Information Technology and Environmental Services Departments' project delivery costs, bringing the total project cost to \$24 million. The ongoing cost for the subscription and maintenance and support after the initial three-year term is estimated to be \$255,000 per year based on a permonth fee for each active meter for the four, five-year options and will be included in the development of the Base Budget within the Water Utility Operating Fund beginning in 2027-2028.

Upon City Council approval of the Recommendation, the project's budget will increase to \$24 million (\$6.5 million in 2024-2025 and \$17.5 million total in 2025-2026 and 2026-2027). When compared to the 2025-2029 Capital Improvement Program, the AMI project was \$14.5 million, of which \$5 million was budgeted for 2024-2025 and the remaining \$9.5 million for subsequent years would be primarily funded through commercial paper.

The project budget has changed due to expanded project scope, increases in material and labor costs due to inflation, and procurement delays. As a result, the sole responsive bidder was higher than the initial Engineer's Estimate. There is sufficient Unrestricted Ending Fund Balance in 2024-2025 to support the additional \$1.5 million needed for the AMI project in the Water Utility Capital Fund. Currently, there is \$24.5 million budgeted in financing proceeds attributed to two different projects utilizing commercial paper – AMI project and the Water Resources Administration and Operations Facility. Actions to align the budget for the AMI projects beyond 2024-2025 will be included in the 2025-2027 Proposed Biennial Capital Budget, which will be released in late April.

Furthermore, on the May 6, 2025 agenda, staff seeks City Council approval for the issuance of commercial paper notes to finance this capital project in the amount of up to \$23 million. All related debt service and commercial paper fees will be paid by the Water Utility Capital Fund, subject to the appropriation of funds.

1. TOTAL COST OF AGREEMENT (3-YEAR INITIAL TERM): \$21,322,261

Cost Element	Cost	
Project Kickoff	\$102,634	
Business Process Analysis, Bridge Gaps - Work-arounds,	37,639	
Customizations		
Pre-Installation Surveys	571,448	
Initial Deployment Area Bench Testing Phase	0	
Initial Deployment Area Bench Testing Acceptance	0	
Initial Deployment Area Field Testing Phase	679,905	
Initial Deployment Area Field Testing Acceptance	0	
As-Needed Warehousing Costs - Initial Deployment Phase	0	
As-Needed Warehousing Costs - Full Deployment Phase	501,600	
Full Deployment Phase	16,768,062	
Training and Documentation	0	
Full Deployment Phase Acceptance	0	
Final System Acceptance	982,173	
AMI Solution – Subscriptions, Maintenance and Support	712,800	
Taxes and Fees*	966,000	
TOTAL NOT-TO-EXCEED AMOUNT (INITIAL TERM)	\$21,322,261	
Contingency (10%)	2,132,226	
TOTAL AMOUNT OF RECOMMENDATION	\$23,454,487	

2. CONTRACT COST ELEMENTS (3-YEAR INITIAL TERM):

*The taxes and fees cost element is estimated based on the entire or portions of the agreement value, which require the payment of taxes and fees.

BUDGET REFERENCE

The table below identifies the fund and appropriation to fund the first year of the contract recommended as part of this memorandum and the remaining project costs, including project delivery, implementation, and contingency costs. The remaining two years of the contract will be subject to the appropriation of funds.

						2024-2025	Last Budget
Fund	Appn.	Appropriation	Total	Rec. Budget	Amount for	Capital	Action
#	#	Name	Appropriation	Action	Contract	Budget	(Date, Ord.
						Page	No.)
500	433Z	Advanced	\$5,000,000	\$1,500,000	\$21,322,261*	301	6/18/2024,
		Metering					31102
		Infrastructure					
		Implementation					
500	8999	Unrestricted	\$2,341,595	(\$1,500,000)	N/A	300	10/22/2024,
		Ending Fund					31133
		Balance					

*The total cost of the agreement over the initial term is \$21.3 million of which \$6.5 million will be spent in 2024-2025.

COORDINATION

This memorandum was coordinated with the City Attorney's Office, the Department of Planning, Building, and Code Enforcement Department, and the Department of Public Works' Office of Equality Assurance.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the May 6, 2025 City Council meeting.

SJMWS will be conducting outreach to customers before, during, and after the project implementation to inform them about the project and the additional information and capabilities available to customers through the adoption of AMI technology.

COMMISSION RECOMMENDATION AND INPUT

No commission recommendation or input is associated with this action.

<u>CEQA</u>

Categorically Exempt, File No. ER25-032, CEQA Guidelines Section 15301 - Existing Facilities.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/ MARIA ÖBERG Director Finance Department /s/ JEFF PROVENZANO Director Environmental Services Department

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Budget Director

For procurement and contract-related questions, please contact Dr. Albie Udom, Deputy Director of Finance – Purchasing and Risk Management, at albie.udom@sanjoseca.gov.

For program-related questions, please contact Nicole Harvie, Principal Engineer, Environmental Services Department, at nicole.harvie@sanjoseca.gov.