Agenda

Sacramento Suburban Water District

Facilities and Operations Committee

3701 Marconi Avenue, Suite 100
Sacramento, CA 95821

Monday, February 12, 2018
3:00 p.m.

Public documents relating to any open session item listed on this agenda that are distributed to the Committee members less than 72 hours before the meeting are available for public inspection in the customer service area of the District's Administrative Office at the address listed above.

The public may address the Committee concerning any item of interest. Persons who wish to comment on either agenda or non-agenda items should fill out a Comment Card and give it to the General Manager. The Committee Chair will call for comments at the appropriate time. Comments will be subject to reasonable time limits (3 minutes).

In compliance with the Americans with Disabilities Act, if you have a disability, and you need a disability-related modification or accommodation to participate in this meeting, then please contact Sacramento Suburban Water District Human Resources at (916)679-3972. Requests must be made as early as possible and at least one-full business day before the start of the meeting.

Call to Order

Pledge of Allegiance

Roll Call

Public Comment
This is an opportunity for the public to comment on non-agenda items within the subject matter jurisdiction of the Committee. Comments are limited to 3 minutes.

Consent Items
The committee will be asked to approve all Consent Items at one time without discussion. Consent Items are expected to be routine and non-controversial. If any member of the Committee, staff or interested person requests that an item be removed from the Consent Items, it will be considered with the action items.

1. Minutes of the October 4, 2017 Facilities and Operations Committee Meeting
   Recommendation: Approve subject minutes.

Items for Discussion and Action

2. Fixed Network Meter Reading Issues
   Receive written staff report and direct staff as appropriate.

3. Drive-By Automated Meter Reading System Issues
   Receive written staff report and direct staff as appropriate.

4. Main Replacement Program - Master Service Contract for Service Lines
   Receive written staff report and direct staff as appropriate.

5. Regional Water Meter Replacement Study
   Receive written staff report and direct staff as appropriate.

6. 2018 Water Transfer Program
   Receive written staff report and direct staff as appropriate.

Adjournment

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Upcoming Meetings:

Monday, February 26, 2018 at 6:00 p.m., Regular Board Meeting

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I certify that the foregoing agenda for the February 12, 2018 meeting of the Sacramento Suburban Water District Facilities and Operations Committee was posted by February 8, 2018 in a publicly-accessible location at the Sacramento Suburban Water District office, 3701 Marconi Avenue, Suite 100, Sacramento, California, and was made available to the public during normal business hours.

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Dan York
General Manager/Secretary
Sacramento Suburban Water District

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Item 1

Minutes

Sacramento Suburban Water District
Facilities and Operations Committee
Wednesday, October 4, 2017

Call to Order
Chair Schild called the meeting to order at 4:00 p.m.

Roll Call

Directors Present:	Neil Schild and Dave Jones.
Directors Absent:	None.
Staff Present:	General Manager Rob Roscoe, Assistant General Manager Dan York, Heather Hernandez-Fort, John Valdes and Dana Dean.

Public Present: William Eubanks and Mitch Dion.

Public Comment
None.

Consent Items

1. **Minutes of the July 27, 2017 Facilities and Operations Committee Meeting**
   Chair Schild commented on his question on Item 2 in the minutes, noting that it didn't change the minutes of the meeting, he just wanted to add clarification.

   Director Jones moved to approve Item 1; Chair Schild seconded. The motion passed by unanimous vote.

AYES:	Schild and Jones.	ABSTAINED:	
NOES:		RECUSED:	
ABSENT:			

Items for Discussion and Action

2. **Regional Partnership – Groundwater Banking**
   Assistant General Manager Dan York (AGM York) presented the staff report.

   Director Schild suggested for staff to find out how much it would cost to wheel water through the cooperative transmission pipeline from El Dorado Irrigation District (EID).

   William Eubanks (Mr. Eubanks) suggested to trade water for water instead of a monetary reimbursement.

   The Committee expressed an expectation that Rio Linda Elverta Community Water District would be entering into a contract with EID, and that the District would just wheel the water.

General Manager Robert Roscoe (GM Roscoe) opined that the District would likely only have a contract for the conveyance capacity.

Director Schild suggested that staff bring this Item back as information in the General Manager's report at the October 16, 2017 regular Board meeting.

3. **Amending Regulations Nos. 1, 7 and 9 of the Regulations Governing Water Service**
John Valdes (Mr. Valdes) presented the staff report. He recommended approving the changes brought to the Committee then allow staff more time to review Director's comments.

Director Schild agreed with Mr. Valdes recommendation.

Director Schild offered to meet with staff to assist with edits to the document. Mr. Valdes expressed that he would schedule a time to meet with Director Schild.

The Committee suggested that staff review the edits made by Director Schild then bring the document, with all edits, to the November 2017 regular Board meeting for approval.

4. **Palm Well Site Issue Update**
AGM York presented the staff report.

Director Jones expressed that he visited the site and noticed a large dip which could be a potential hazard.

AGM York expressed that he would contact County to have the dip evaluated.

Mr. Eubanks inquired who funds the removal of trash and debris at properties.

GM Roscoe expressed that staff contacts County Code Enforcement for general hazardous conditions.

Director Schild expressed that it was a good report.

5. **City of Sacramento Agreement and Wholesale Water Rates**
AGM York presented the staff report.

The Committee appreciated the report.

Adjournment
Director Schild adjourned the meeting at 4:34 p.m.

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Dan York
General Manager/Secretary
Sacramento Suburban Water District

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SACRAMENTO SUBURBAN WATER DISTRICT

Facilities & Operations Committee
Agenda Item: 2

Date: February 1, 2018

Subject: Fixed Network Meter Reading Issues

Staff Contact: Matt Underwood, Operations Manager

Recommended Committee Action:
Receive report from staff on the issues being encountered with the District's Advanced Metering Infrastructure fixed network meter reading system and direct staff as appropriate.

Discussion:
As reported in October and November 2017 at the regular Board meetings, the District's Advanced Metering Infrastructure (AMI) fixed network meter reading system is experiencing significant problems. The KP Electronics MegaNet system was first deployed in 2010. To date, approximately 26,000 metered services (63% of metered services) have been equipped with the AMI radio-read endpoints. In February 2017, the MegaNet technology was acquired by Mueller Systems. Mueller Systems had previously been the national distributor for the MegaNet system and is familiar with all aspects of the product, including sales, service, and support.

Due to unforeseen issues with internal components and an inability to withstand environmental stress, the endpoint has gone through several changes and modifications since initial deployment in 2010. Each improvement to the endpoint has held up an average of 5-6 months before failures begin to appear. KP Electronics had been an excellent business partner to the District and had been very responsive and reactive to the District's needs, up to and including hiring a contractor, at their cost, to replace all defective endpoints. It should be noted that the industry standard warranty is for product replacement only.

The original AMI network included eleven (11) collectors. In an effort to improve system performance and area coverage, KP Electronics continually upgraded existing collectors with the latest technology and installed additional collectors throughout the District, bringing the total number of collectors to twenty-seven (27). The costs associated with the improvements were born by KP Electronics.

The problems are broken down into two general categories: a) AMI endpoint failures and b) AMI fixed network issues.

The majority of the endpoints that are currently failing are a previous version that had been identified as having a potential for failure. KP Electronics had previously arranged to have a contractor replace the previous version endpoints as they fail, at no cost to the District. Mueller Systems has continued this practice. Approximately 1,375 endpoints have been replaced by the contractor working for KP Electronics/Mueller Systems in 2017. Approximately 6,500 of this previous version of endpoints remain in the system.

The issues with the network are of greater concern. The endpoints are sending out a signal as expected, but some of the signals are not being received by the network, resulting in missed meter reads for billing purposes. The issue is not concentrated to specific areas of the District.

KP Electronics had previously directed the contractor to replace failed endpoints without conducting any investigation as to the reason of the failure. Mueller systems has recently made the decision to have the contractor perform thorough investigations before every replacement in an effort to gather data that will assist in determining the nature of the non-read. This will be useful information that will be provided to the District in the future when it becomes available.

When a billing read is not received, the water service bill is based on the District's estimate of the quantity of water delivered. On the following month, the non-operational water meters require a manual read by staff for billing. When this occurs, the read is a high priority and staff have to visit the locations to gather the manual read without actually resolving the issue at hand. This additional workload is having a direct impact on operations. Below is a recap of the recent manual reads due to too many estimates:

- August – 13 manual reads
- September – 35 manual reads
- October – 156 manual reads
- November – 83 manual reads
- December – 71 manual reads

AMI systems are complex and offer many benefits to a utility and its customer base. This does not change their primary function as a meter reading system for billing. The District considers any endpoint that does not deliver a billing read within a 5-day window as a failed unit, regardless of the version and regardless of the reason. Failed endpoints become manual read meters for District staff, regardless of the cause of the problem.

Since acquiring the MegaNet technology, Mueller Systems endpoint production has been limited due to a fatal flaw with the production line. They were unable to produce endpoints between September 2017 and December 2017. At the end of December 2017 the final product passed their quality assurance inspections. In January 2018, the District began receiving shipments of 150 endpoints per week. Mueller Systems has stated they anticipate increasing production; however, due to a lack of inventory on hand it has caused a backlog of Service Requests that are slated to be replaced by the Mueller Systems contractor. In addition, KP Electronics was replacing all endpoints that were not reporting regardless of the version. Mueller Systems had been reluctant to

agree to replace anything other than the older version that has been identified with having a potential for failure. During recent discussions, at the request of District staff, Mueller Systems has agreed to have the contractor replace all non-operational endpoints until the problems with the network can be identified and mitigated.

Mueller Systems has been on site and analyzed the District's existing fixed network infrastructure. During these investigations, they have determined that 9 of the 27 collectors have equipment issues which are contributing to communication problems. In addition, Muller Systems has completed a propagation study to evaluate system coverage and has determined the need for additional collectors. Mueller Systems is currently working with a contractor to make the repairs to the existing collectors and complete the installation of additional collectors. No schedule for the proposed work has been provided to the District; however, repairs are expected to be completed in February 2018. All work on the network will be conducted at the expense of Mueller Systems.

District staff are holding weekly conference calls with Mueller Systems in an attempt to resolve the issues. Mueller Systems has been working diligently in an effort to resolve the issues. Staff is optimistic and has been satisfied with the current progress being made to improve system performance.

The District has formed an internal AMI/AMR Focus Group consisting of the Operations Manager, Field Services Superintendent, Distribution Foreman, Field Operations Coordinator, Purchasing Specialist, Information Technology Manager, Administrative Services Manager, Finance Director, and Engineering Manager. The purpose of the Focus Group is to determine the best course of action going forward and to minimize the impacts these problems are causing.

District staff continues to be actively involved with local and regional meter groups and the CA-NV AWWA Meter Committee. These meetings bring together water purveyors from around California and Nevada. The meetings focus on topics directly related to metering and meter reading technologies. Through networking and continually evaluating available technologies, staff has identified two technologies that warranted further consideration for a solution to the District's ongoing AMI issues. Staff have conducted meetings with the two AMI vendors to determine the best course of action if the decision is made to switch to an alternate product.

Staff will provide updates to the Board as conditions unfold.

Fiscal Impact:
No fiscal impact at this time, however, there could potentially be a large cost if the District were to change vendors.

Strategic Plan Alignment:
Facilities and Operations – 2.A. The District will utilize appropriate planning tools, identify financial resources necessary, and prioritize system requirements to protect and maintain District assets and attain water resource objectives incorporating resource sustainability and lifecycle cost analysis into the framework.

Facility and Operations - 2.B. Monitor and improve system efficiencies in operating and maintaining system infrastructure.

Facility and Operations - 2.D. Manage assets by implementing, preventive and predictive maintenance and analysis programs on District assets to extend their life and reduce service interruptions.

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SACRAMENTO SUBURBAN WATER DISTRICT

Facilities & Operations Committee
Agenda Item: 3

Date: February 8, 2018

Subject: Drive-By Automated Meter Reading System Issues

Staff Contact: Matt Underwood, Operations Manager

Recommended Committee Action:
Receive staff report on changing vendor from Drive-By Automated Meter Reading System to Advanced Metering Infrastructure cellular endpoints.

Background:
The District currently employs two meter reading technologies: the AMR (Automated Meter Reading) and the newer AMI (Advanced Metering Infrastructure).

AMR is the older legacy system and is a drive-by technology. AMR is a mobile solution that requires staff to drive a vehicle equipped with meter reading equipment to collect the read monthly. This technology provides one read per month that is utilized for billing. The two predecessor districts began using AMR technology in the early 1990's. The existing AMR radio-read endpoints were installed in the District from 2003 to 2010. To date, approximately 14,400 metered services (37% of metered services) are equipped with AMR endpoints manufactured by Badger Orion.

AMI is the industry's successor technology to AMR. While AMR required a vehicle to drive by the meter location to collect meter data from the endpoint, AMI has a stronger signal output and uses a fixed network of radio receiver stations to receive the information and transmit it to the owner agency via cellular service. This is commonly referred to as "fixed network".

Discussion:

Failure of AMR Endpoints

The industry anticipated life expectancy of an AMR endpoint is 10-15 years. The average District lifespan of this product has been approximately 12 years. Within the next five (5) years, all AMR endpoints will be older than 12 years. The number of AMR endpoints that are replaced due to failure have increased every year, therefore, staff expects essentially all AMR endpoints to fail by age 12.

As reported at the October and November 2017 Regular Board Meetings, staff has recently identified a version of AMR endpoint that were installed between 2008-2010 that are experiencing early failures due to a defect in the product. In 2017, staff replaced 1,500 of these endpoints that failed prematurely. The defect in the product causes the endpoint to lose communication with the meter register, however, the endpoint continues to send a signal to the meter reading equipment and reports the read on the meter register as a "0". For billing purposes a "0" read is considered a rollover. For example, after 9,999 ccf have passed through a meter the odometer rolls over to "0". If the actual read on the register is 4,000 ccf and the endpoint sends a "0" read, a customer could potentially be billed for 5,999 ccf. The vendor is aware of the problem and has acknowledged the defect in the product. The specific endpoints are identified by a unique serial number range. Since these are the newest AMR endpoints in the system, staff had anticipated that they would continue operating for some years - until 2020 or later. However, staff now needs to develop a plan for the proactive replacement of these units.

The warranty on this product is a 10-year full replacement and 10-year prorated credit towards the purchase of a like-in-kind product. Since the District was no longer installing AMR endpoints, the failed units were not previously returned for warranty exchange. In February 2017, staff successfully negotiated with the vendor to provide credit towards the purchase of new water meters (not endpoints) for the value of the failed AMR endpoints that were returned under warranty.

Replacement of Failed AMR Endpoints

The failures have increased from 850 failures in 2016, to 1,967 failures in 2017 (132% increase). It's important to note that staff has two days prior to billing to mitigate as many non-reads as possible. An endpoint takes an average of 25 minutes to replace and during the final three months of 2017 staff worked an additional 50 hours of overtime to replace as many endpoints as possible for billing.

Historically, failed AMR endpoints were replaced with AMI endpoints. Due to ongoing problems with the District's fixed network AMI system and the uncertainty of that product's reliability going forward, staff recently made the decision to begin replacing failed AMR endpoints with warranty replacement (no cost) AMR endpoints. This is the first time AMR endpoints have been installed since 2010. The product is being provided by the vendor at no cost to the District under the warranty. This is considered a short-term solution since the District has been moving away from this old and labor-intensive technology for some time.

Due to the documented ongoing issues with the AMI and AMR meter reading systems, the District formed an AMI/AMR Focus Group (Focus Group) in October 2017. The purpose of the Focus Group is to involve all internal stakeholders to identify the problems, determine the best course of action going forward, and to minimize the impacts of these problems.

Negotiations with Manufacturer of Cellular AMI

In October 2017, staff began discussions with Badger Meter in regards to applying warranty credit from failed AMR endpoints towards the purchase of Badger Meter's Orion Cellular endpoints.

Cellular AMI is the latest technology of AMI (non-drive-by) endpoint. Cellular endpoints transmit monthly, daily, hourly, and 15 minute read intervals to the hosted Badger Meter software ("Beacon") via existing private cellular networks (e.g., Verizon, AT&T, etc.).

The Orion Cellular product provides all of the standard features of other AMI systems, such as leak detection, no usage indication, usage on accounts in disconnect status notification, and high usage notification. An advantage of cellular technology comes from the cost savings associated with utilizing existing cellular infrastructure versus the cost of installing and maintaining infrastructure required of a "conventional" fixed network. Since cellular endpoints communicate through any existing commercial cellular network, the potential for total network failure is considered to be very low. A disadvantage of the cellular endpoint is the typical cost of the monthly cellular service charge per endpoint. Depending on quantity installed, cellular charges range between $0.81 and $0.89 per unit per month. List price for a cellular endpoint is $100.50. Combined with 10 years of cellular service the endpoint price is $207.30.

After numerous negotiations by staff with the manufacturer, Badger Meter proposed the following:

- $130 per endpoint, with 10 years of cellular service, with a valid failed AMR warranty return; and
- $180 per endpoint, with 10 years of cellular service, without a warranty return (see Exhibit 4).

District staff held several more meetings with Badger Meter over the next few months. Staff requested that Badger Meter provide: a) pricing that includes full warranty replacement cost credit for all remaining early failure version endpoints, regardless of whether they have failed; and b) prorated credit for all remaining AMR endpoints. After these negotiations, Badger Meter agreed to the following:

- First 6,500 Endpoints:
    - $130 per endpoint.
    - 10 years of cellular service included.
    - No warranty return required.
    - Covers all remaining endpoints with an identified product defect as well as those removed in 2017 due to failure.
    - Price reflects full credit from the original purchases 8-10 years ago.
- Next 14,000 Endpoints:
    - $150 per endpoint.
    - 10 years of cellular service included.
    - No warranty return required.
    - Covers all of the remaining AMR endpoints in the system.

  - Price reflects a discount for the average prorated warranty on all remaining AMR endpoints in the system.
- Additional Endpoints:
  - $180 per endpoint.
  - 10 years of cellular service included.
  - Price reflects a discount for purchasing 10 years of service in advance.
- Prices are subject to an annual price adjustment based on the Producers Price Index (PPI). The average increase over the past two years was 2.35% per year.
- The price per unit includes all associated costs of the service and the software.
- Waiving the Engagement Fee of $7,140, which covers set-up and training costs.
- The quote is not a commitment to purchase a minimum quantity.

In addition, the cellular endpoint will fit in all of the District's existing meter box lids. This is a significant cost avoidance of approximately $70 per lid.

Assessment of Cellular AMI Option

The current pricing offered provides an incentive to the District to proactively:

- Replace AMR endpoints that have been identified as having a product defect; and
- Replace endpoints that are approaching the end of their anticipated useful life before they become non-operational.

Cellular capabilities have vastly improved with the introduction of strong and secure Long-Term Evolution (LTE) technology. Cellular solutions, such as endpoints, provide increased deployment flexibility because no District infrastructure is needed. Thus, operating costs are substantially reduced. Badger Meter's "Orion Cellular" endpoint, for example, uses secure commercial nationwide cellular networks to offer additional benefits to utility customers including reliable real-time data, mobile message backup, extended field life and flexible deployment.

Staff has been piloting the Orion Cellular endpoint since 2014. The pilot consists of 25 endpoints and access to Badger Meter's hosted software. The endpoints, originally installed in meter boxes, are currently being utilized in conjunction with the District's fire hydrant meters. The pilot has been a great success and staff has experienced no failures over the past four years.

In excess of 30 years, Badger Meter has been an outstanding business partner to SSWD and the predecessor Northridge Water District. They continue to stand behind their products with great customer service and product support. As demonstrated with the current warranty negotiations, Badger Meter continues to focus on the needs of the District and the continued success of the partnership. Through research, networking, and discussions at regional meter and meter reading

technology meetings, staff has received only positive feedback on the cellular endpoint, which is also being installed at several neighboring agencies such as Placer County Water Agency and City of Sacramento.

Due to the ongoing AMI issues and the uncertainty of that product going forward, Staff considers cellular endpoints the best option for replacing the failing AMR endpoints. Upon staff's recommendation, the General Manager has approved the purchase of Badger Meter's Orion Cellular endpoint to replace failed AMR endpoints.

Staff has identified approximately 1,200 of the oldest endpoints that are recognized as having a product defect. These were installed in subdivisions in 2008 in conjunction with CIP main replacement and meter-retrofit projects. Cost to replace 1,200 endpoints is estimated at $200,000. This project will be funded through the 2018 O&M budget. Staff will provide quarterly updates on 1) amount of endpoints replaced, and 2) amount of endpoints replaced due to failures. If failures continue to escalate, staff could potentially request a budget amendment later this year.

Fiscal Impact:
Cost to replace 1,200 endpoints is estimated to be $200,000. If failures continue to escalate, staff will potentially request of the Board a budget amendment.

Strategic Plan Alignment:
Facilities and Operations – 2.A. The District will utilize appropriate planning tools, identify financial resources necessary, and prioritize system requirements to protect and maintain District assets and attain water resource objectives incorporating resource sustainability and lifecycle cost analysis into the framework.

Facility and Operations - 2.B. Monitor and improve system efficiencies in operating and maintaining system infrastructure.

Facility and Operations - 2.D. Manage assets by implementing, preventive and predictive maintenance and analysis programs on District assets to extend their life and reduce service interruptions.

Replacement of meter reading endpoints in a timely manner improves customer service and promotes a more efficient and economical support function, benefitting ratepayers.

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SACRAMENTO SUBURBAN WATER DISTRICT

Facilities & Operations Committee
Agenda Item: 4

Date: February 8, 2018

Subject: Main Replacement Program - Master Service Contract for Service Lines

Staff Contact: David Espinoza, Senior Engineer

Recommended Committee Action:
Receive report on Master Service Contract for water service line installation as part of the Distribution Main Replacement Program. Direct staff to recommend to the full Board approving the award of a multi-year Master Service Contract (MSC) to Flowline Contractors, Inc. (Flowline) and authorize the General Manager to execute any subsequent task orders on behalf of the District, subject to legal counsel review.

Background:
The most recent MSC for water service line installation of the Distribution Main Replacement Program has expired. The MSC has proven to be successful for the District in the past. It allows for better long range planning and design for the Distribution Main Replacement Program. The MSC approach has shown savings of 10 to 15%, or more, when compared to conventional competitive bidding. The MSA is intended to be responsible for the bulk of the main replacement related work for the next 3 to 5 years. There will be a competitively-bid main extension or replacement project on occasion to: 1) ensure the District is provided competitive pricing when the MSC project prices are negotiated annually; and 2) to complete work beyond Flowline's availability.

Discussion:
The first project under the MSC will be the Edison Meadows Water Main Replacement Project. This project includes the installation of approximately 23,000 feet of 6-, 8- and 12-inch mains, and 350 services, for both commercial and residential properties. The work includes pipe and meter installations on residential and commercial properties and work in minor and major roadways. Also included in the project are fire hydrant installations and fire service connections.

The contractor for the main line installation portion of the project is Doug Veerkamp General Engineering (Veerkamp). At the regular Board meeting of July 17, 2017, the Board approved and directed staff to extend the contract with Veerkamp (under the MSC for main line installation) to complete the Edison Meadows Main Replacement Project. Staff will be procuring bids for the next main line installation Master Service Contract later this year for the next 3 to 5 year Master Service Contract for main line installation program.

To continue the MSC program, staff, with the assistance of the District's consulting engineer, Domenichelli and Associates (D&A), prepared and placed out for bid a 3 to 5 year MSC for service line installations. Bid documents were provided to a select list of 7 local, high caliber and experienced utility contractors: Veerkamp, Florez Paving, Flowline, Lund Construction (Lund), Marques Piping, Navajo Pipelines and Rawles Engineering. Navajo Pipelines did not show interest and failed to attend the mandatory pre-bid meeting. Veerkamp and Marques Piping did not provide comment nor provide a bid. Lund is a union contractor and does not self-perform the directional boring for new water services; because there are no competitive union subcontractors available to perform the boring, no bid was submitted by Lund.

Bids:
Bids were due and opened on January 30, 2018, at 2:00 pm, with results shown below:

Service Line Installation Master Service Contract (Engineer's Estimate = $1.90 million)

Contractor	Bid Amount
Flowline Contractors	$1,771,340.00*
Florez Paving	$2,316,000.00
Rawles Engineering	$2,466,280.00**

* Note that a $100.00 difference was noted when adding up the unit prices in Flowline's bid which resulted in a total bid of $1,771,440.00.

** Note that a $50.00 difference was noted when adding up the unit prices in Rawles Engineering's bid which resulted in a total bid of $2,466,330.00.

Staff and D&A carefully reviewed the three bids that were received and recommend that the MSA for service line installation be awarded to Flowline as the lowest responsible and responsive bidder. Staff and D&A further recommend that Florez Paving (ranked number two), and Rawles Engineering (ranked number three), be considered for possible future negotiations should the District not be able to negotiate future contracts with Flowline (the number one ranked firm).

Fiscal Impact:
Approximately $11 million is included in the District's approved Calendar Year 2018 Capital Improvement Program budget for main replacement projects.

Strategic Plan Alignment:
Water Supply – 1.B. Provide for the long-term water supply needs of the customers through prudent planning that will ensure capacity to serve system demands.

Water Supply – 1.D. Manage the District's water supplies to ensure their quality and quantity.

Facilities and Operations - 2.A. The District will utilize appropriate planning tools, identify financial resources necessary, and prioritize system requirements to protect and maintain District assets and attain water resource objectives.

These main replacement projects align with these goals through the planned replacement of worn out water mains and service lines that will improve water system reliability. These projects will also contribute and increase the system's capacity as well as facilitate the District's compliance with State requirements to meter all services by 2025.

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SACRAMENTO SUBURBAN WATER DISTRICT

Facilities & Operations Committee
Agenda Item: 5

Date: February 1, 2018

Subject: Regional Water Meter Replacement Study

Staff Contact: Matt Underwood, Operations Manager

Recommended Committee Action:
Information only. Receive report on a Regional Water Meter Replacement Study collaboration led by Citrus Heights Water District.

Background
As reported at the Facilities and Operations Committee Meeting on July 27, 2017, and at the Regular Board Meeting on September 18, 2017, Citrus Heights Water District (CHWD) is preparing to release a Request for Proposal (RFP) for a Meter Replacement Program Planning Study. The purpose of the RFP is to retain a consulting team to complete a study that will: 1) develop a strategy to replace existing water meters; 2) develop a strategy for the replacement of future generations of meters and meter reading technology; 3) develop a cost estimate for the meter replacement program; 4) develop a funding strategy for the meter replacement program.

CHWD is attempting to determine the level of interest amongst neighboring agencies in participating in a regional meter testing and/or replacement program. CHWD initially inquired of Sacramento Suburban Water District (District or SSWD), San Juan Water District (SJWD), Fair Oaks Water District (FOWD), and Orange Vale Water Company (OVWC) to determine if there is any interest in participating in the subject study. Carmichael Water District (CWD) was recently invited to participate as well.

On June 12, 2017, the District's Assistant General Manager, Field Services Superintendent, and Purchasing Specialist met with the CHWD Project Management Team and discussed the Scope of Services requested in the RFP. SSWD staff reviewed the RFP to determine the potential merit of participation. FOWD informed CHWD that they are not interested in participating in the RFP. Future meetings were calendared between SSWD, CHWD, SJWD, OVWC, and CWD to determine the next steps if the subject effort is to continue.

Discussion:
Numerous meetings were held in the ensuing months. The participating agencies have expressed interest in varying levels of participation due to the state of their respective meter programs.

Following the most recent meeting in January, the decision was made to divide the Meter Replacement Study meetings into two tracks: an Administrative Track and a Technical Track. The Administrative Track Group, which consists of General Managers of the participating agencies as well as the Regional Water Authority (RWA) Executive Director, met on January 25, 2018, to begin developing a Multi-Agency Memorandum of Understanding (MOU). Before the Technical Track Group can finalize the Planning Study RFP, the Multi-Agency MOU will need to be finalized, defining each agency's Level of Participation.

The draft MOU outlines the following Levels of Participation:

- **L1—Audit the Study**—Attend all meetings and participate as desired. No initial financial participation. On-ramps will be available to participate at various times at the L2or L3 Levels of Participation. **Note**—Any decision to move to L2 or L3 will require a negotiated and pro-rated buy-in cost.
- **L2—Selected Participation**—Determine in which components of the Study each agency will participate. A negotiated and pro-rated cost for the Agency's participation at the L2 Level will be identified by all agencies. On-ramps to L3 and off-ramps can be identified for L2 participating agencies.
- **L3—Full Participation**—Including, but not limited to: 1) Cost sharing for the Study as agreed upon by all participating agencies; 2) Participating in all aspects of the Study through to completion (Completion is defined as policy approval by all Governing Boards of each participating agency).

SSWD and CWD have indicated that they have interest in participating at the L1 Level. CHWD, SJWD, and OVWC have indicated that they have interest in participating at the L3 Level.

The next Administrative Track Group meeting is scheduled for February 12, 2018, to continue working on the MOU.

Staff will continue to provide updates.

Fiscal Impact:
There is no fiscal impact to the District at this time.

Strategic Plan Alignment:
Facility and Operations - 2.A. The District will utilize appropriate planning tools, identify financial resources necessary, and prioritize system requirements to protect and maintain District assets and attain water resource objectives incorporating resource sustainability and lifecycle cost analysis into the framework.

Leadership - 5.D. Provide leadership within the community in a positive manner for the mutual benefit of the area (service groups, adjacent water purveyors, county/city/local government).

When mutually beneficial, partnering with neighboring agencies to improve purchasing power can reduce both capital and operating costs benefitting both the District and its rate payers

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SACRAMENTO SUBURBAN WATER DISTRICT

Facilities & Operations Committee
Agenda Item: 6

Date: February 8, 2018

Subject: 2018 Water Transfer Program

Staff Contact: Dan York, General Manager

Recommended Committee Action:
Receive staff report regarding potential water transfers with State Water Project Contractors and water agencies in the Region. Direct the General Manager to request authority from the Board of Directors at the February 26, 2018 regular Board meeting to execute and sign all agreements necessary to implement the Temporary Water Transfer Program for 2018, subject to approval by District legal counsel of any non-substantive changes to such agreements, at a minimum of $200 per acre-foot.

Discussion:
At the December 21, 2017 State Water Contractor (SWC) Board meeting, the SWC Directors approved an action to establish a SWC Dry Year Transfer Program (DYTP) to potentially obtain supplemental water supplies in 2018. The SWC began soliciting interest from potential sellers. District staff was contacted by SWC and requested to be placed on the SWC sellers list in their 2018 DYTP. The SWC has provided the 2018 DYTP water purchase price. Current purchase price for each acre-foot (af) of transfer supplies is $250 per af. Once the Terms and Conditions are finalized, additional information will be provided regarding litigation cost coverage, depletion losses, etc.

District staff has also been contacted by the following agencies to partner in potential water transfers:

- Placer County Water Agency (PCWA)
- San Juan Water District (SJWD)
- Carmichael Water District (CWD)
- County of Sacramento (County)
- City of Sacramento (City)

In addition, District staff met with SJWD, Fair Oaks Water District (FOWD), Citrus Heights Water District (CHWD) and CWD to determine interest in a regional water transfer. There was

an overall consensus to continue discussions in order to determine if a successful regional water transfer could be accomplished.

The following is a brief overview of potential transfers:

1. PCWA to make releases from their reservoirs in 2018. They have identified at least one buyer.
2. City to institute a groundwater substitution transfer of Area D Surface Water.
3. City to exchange surface water diversions for District groundwater.
4. SJWD in a regional collaborate water transfer which includes participation with CHWD and FOWD.
5. County Council approved a 2018 Pilot Water Transfer. The County identified CWD and SSWD as partners in the pilot transfer.
6. SSWD to institute a groundwater substitution transfer in both North Service Area and South Service Area.

District staff will update the Board on the status of the 2018 Water Transfer Program.

Fiscal Impact:
The gross revenue potentially received from water transfers is unknown at this time.

Strategic Plan Alignment:
Finance (C) – Combine sound and efficient business procedures with regular and simple reporting, ensuring proper handling and reporting of all District financial processes. Securing a water transfer agreement will provide revenue to assist in reducing District debt service.

Leadership – 5.C. Participate in regional water management partnerships. Participation in the 2009 Drought Water Bank requires the District to partner with several agencies and work through SGA and RWA in the process as well as the State of California, Department of Water Resources.

The District's ratepayers will benefit from a water transfer as it will generate additional revenues that can be used by the District for water system maintenance, replacements and upgrades or other purposes without any impacts on service.