



WEST VALLEY WATER DISTRICT
855 W. Base Line Road, Rialto, CA 92376
PH: (909) 875-1804 FAX: (909) 875-1849

**SAFETY AND TECHNOLOGY COMMITTEE MEETING
AGENDA**

TUESDAY, SEPTEMBER 13, 2022 - 6:00 PM

NOTICE IS HEREBY GIVEN that West Valley Water District has called a meeting of the Safety and Technology Committee to meet in the Administrative Conference Room, 855 W. Base Line Road, Rialto, CA 92376.

On March 4, 2020, Governor Newsom declared a State of Emergency resulting from the threat of COVID-19. On September 16, 2021, Governor Newsom signed Assembly Bill No. 361 into law. Assembly Bill No. 361 amends Government Code section 54953(e) by adding provisions for remote teleconferencing participation in meetings by members of a legislative body, without the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions. The West Valley Water District adopted a resolution determining, by majority vote, that, as a result of the declared State of Emergency, the District is adopting the State protocol which allows meetings in person and/or via teleconference. Accordingly, it has been determined that all Board and Workshop meetings of the West Valley Water District will be held pursuant to Assembly Bill No. 361, the Brown Act and will be conducted via teleconference and in person. Members of the public may listen and provide public comment via telephone by calling the following number and access code: Dial: (888) 475-4499, Access Code: 840-293-7790 or you may join the meeting using Zoom by clicking this link: <https://us02web.zoom.us/j/8402937790>. Public comment may also be submitted via email to administration@wvwd.org. If you require additional assistance, please contact administration@wvwd.org.

BOARD OF DIRECTORS

Director, Kelvin Moore, (Chair)
Director, Dan Jenkins

I. CALL TO ORDER

II. PUBLIC PARTICIPATION

The public may address the Board on matters within its jurisdiction. Speakers are requested to keep their comments to no more than three (3) minutes. However, the Board of Directors is prohibited by State Law to take action on items not included on the printed agenda.

III. DISCUSSION ITEMS

1. General Update to Safety and Technology Committee
2. Consider Approving a Project to Implement an Advanced Metering Infrastructure System. **Pg. 3**

IV. ADJOURN

DECLARATION OF POSTING:

I declare under penalty of perjury, that I am employed by the West Valley Water District and posted the foregoing Safety and Technology Committee Agenda at the District Offices on September 8, 2022.



Nancy Albitre, Acting Board Secretary



**BOARD OF DIRECTORS
SAFETY AND TECHNOLOGY COMMITTEE
STAFF REPORT**

DATE: September 13, 2022
TO: Safety and Technology Committee
FROM: Van Jew, Acting General Manager
SUBJECT: CONSIDER APPROVING A PROJECT TO IMPLEMENT AN ADVANCED METERING INFRASTRUCTURE SYSTEM

BACKGROUND:

Many years ago, West Valley Water District, (“District”), initiated a project to implement an Automatic Meter Reading System, (“AMR”), to take the place of manually reading each meter. AMR systems transmit the water meter readings, (one-way communication), from each meter to handheld or truck mounted devices. AMR systems significantly reduced the amount of time required to gather meter readings, as well as the potential for data entry errors. The AMR project was completed about 2 years ago. However, since the original undertaking of the AMR project, meter reading technology has advanced. Advanced Metering Infrastructure Systems, (“AMI”), enable two-way communication over a fixed network between the District and the metering endpoints. Transitioning to an AMI system offers several benefits.

DISCUSSION:

Currently, the District collects readings via AMR for just under 24,000 metered service connections, which are divided into 12 separate reading routes. It takes approximately 6-8 hours to drive each route to collect the readings. Due to development within the District’s service area, the number of service connections has been increasing by an average of about 500 per year. Transitioning to AMI will help the District better handle the increasing workload caused by the increasing number of service connections.

Potential benefits include, but are not limited to:

- Increased data collection capability. With an AMI system, the whole distribution network can be continuously monitored by hourly interval reads. This capability can be used to help detect leaks, and to provide a foundation for analyzing usage patterns, (important for water conservation and water use efficiency). The meter reading for billing would be instantaneous compared to driving routes and collecting AMR reads on a laptop. Opening and closing reads could be obtained immediately without sending field staff.

- Improved system monitoring capability. The District could strategically install the meters that monitor pressure and temperature. Those could be used to collect important data for Operations staff, (we currently do not have any of these meters in our system).
- Potential for workflow improvements and increased efficiencies. Reductions to the amount of time required for field staff to collect reads, would allow them additional time for customer interactions, thereby improving our level of customer service. It would also allow for staffing resources to be shifted to other work that is important but has been lower priority.

The Board of Directors has already recognized the merits of implementing an AMI system and at its April 15, 2021 regular meeting, approved the “Water Infrastructure and Technology Improvement Plan”. Priority 7 on the list was to implement an Advanced Metering Infrastructure System, (“AMI”).

District staff began laying the foundation for a successful transition to AMI years ago. The District’s Chief Water Systems Operator for the Meter Reading Division began installing Meter Transmitter Units, (“MXUs”), that are capable of communicating with both AMR and AMI systems. As a result, staff anticipates that approximately 48% of the meters will immediately be able to be read via AMI once the system is turned on. The remaining meters will gradually be transitioned from the AMR system to the AMI system as part of the regular annual meter maintenance and replacement program. The District would maintain dual systems, (both AMR and AMI), until those remaining meters could be fully converted to AMI. On average, staff has been repairing and replacing approximately 1,500 - 2,000 meters per year, so the dual systems would likely be necessary for approximately 6 - 8 years.

In order to proceed with the implementation of an AMI system, the following are required:

- **Hardware (Aqua-Metric One-time costs of \$139,291.25):** Installation of Sensus M400B2 BaseStations and RV55 Cellular Backhaul Devices at 4 existing towers throughout the District. A radio frequency study was conducted and the existing towers at the Oliver P. Roemer, (“OPR”), Treatment Facility, the South Shop, Well 54, and Booster Station 2-3 were identified as ideal locations to provide the necessary coverage for communications, (see **Attachment A**). Aqua-Metric Sales Company, (the authorized Sensus Distribution Channel Partner in California), has provided a quote in the amount of \$139,291.25 for the equipment and installation, (see **Attachment B**). Note: The equipment and installation costs for OPR are reflected on the quote as zero. That is due to a warranty settlement between Sensus and the District for some MXU’s that were programmed incorrectly, leading to early failures in early 2021, (the settlement was approved by the Board at its May 20, 2021 regular meeting).
- **Software (Aqua-Metric Recurring costs of \$35,068 plus One-time costs of \$27,957):** Annual Software as a Service, (“SaaS”), licensing fees for Sensus Regional Network Interface (“RNI”), which is the communications network. Annual SaaS licensing fees for Sensus Analytics Enhanced, which is for the meter reading analytics and reporting system. One-time setup, integration, and training fees. The detailed costs are included on the quote from Aqua-Metric Sales Company, which is included as **Attachment C**.

- **Software (Tyler Technologies Recurring costs of \$750 plus One-time costs of \$4,290):** Annual maintenance fee and a one-time implementation fee for the additional Meter-Reader Interface that would be required in order to import the AMI reads into the billing system, (see **Attachment D**).

FISCAL IMPACT:

The project to implement an AMI system includes both recurring annual operating costs and one-time capital costs. The recurring operating costs for the software licensing and maintenance total \$35,818.00. Funding for those costs were included in the FY 2023 Operating Budget in 100-5640-540-5604 Repair & Maintenance / Contracts and Licensing.

The one-time capital costs total \$171,538.25. Funding of \$200,000.00 for the one-time setup, integration, and training costs were included in the FY 2023 Capital Improvement Budget in project #W22020: Advanced Metering Infrastructure AMI - Data Collection Network.

	O&M	CIP	
	Recurring	One-Time	Total
Hardware: Aqua-Metric	-	139,291.25	139,291.25
Software: Aqua-Metric	35,068.00	27,957.00	63,025.00
Software: Tyler Technologies	750.00	4,290.00	5,040.00
	35,818.00	171,538.25	207,356.25

STAFF RECOMMENDATION:

Staff recommends that the Committee forward a recommendation to the Board of Directors to:

1. Authorize entering a contract with Aqua-Metric Sales Company in the amount of \$139,291.25 for the equipment purchase and installation; and
2. Authorize entering a contract with Aqua-Metric Sales Company in the amount of \$63,025.00 for the Year 1 SaaS licensing fees as well as the one-time setup, integration, and training fees; and
3. Authorize entering a contract with Tyler Technologies in the amount of \$5,040.00 for the Year 1 annual maintenance fees as well as the one-time setup fee for the additional Meter-Reader interface.

Respectfully Submitted,

Van Jew

Van Jew, Acting General Manager

VJ:js

ATTACHMENT(S):

1. Attachment A - Sensus FlexNet Design RF Study
2. Attachment B - Aqua Metric_Hardware
3. Attachment C - Aqua Metric_Software
4. Attachment D - Tyler Technologies_Software

Attachment A

Sensus FlexNet Design RF Study

FlexNet Design

Propagation Analysis

11516 – West Valley Water District
Rialto, CA

RF Engineer: Jeff Lewis
 Date: 04/28/2021

Proposed Site Details

Total Site Locations: 4
 Total Base station Counts: 4
 M400B2 = 4

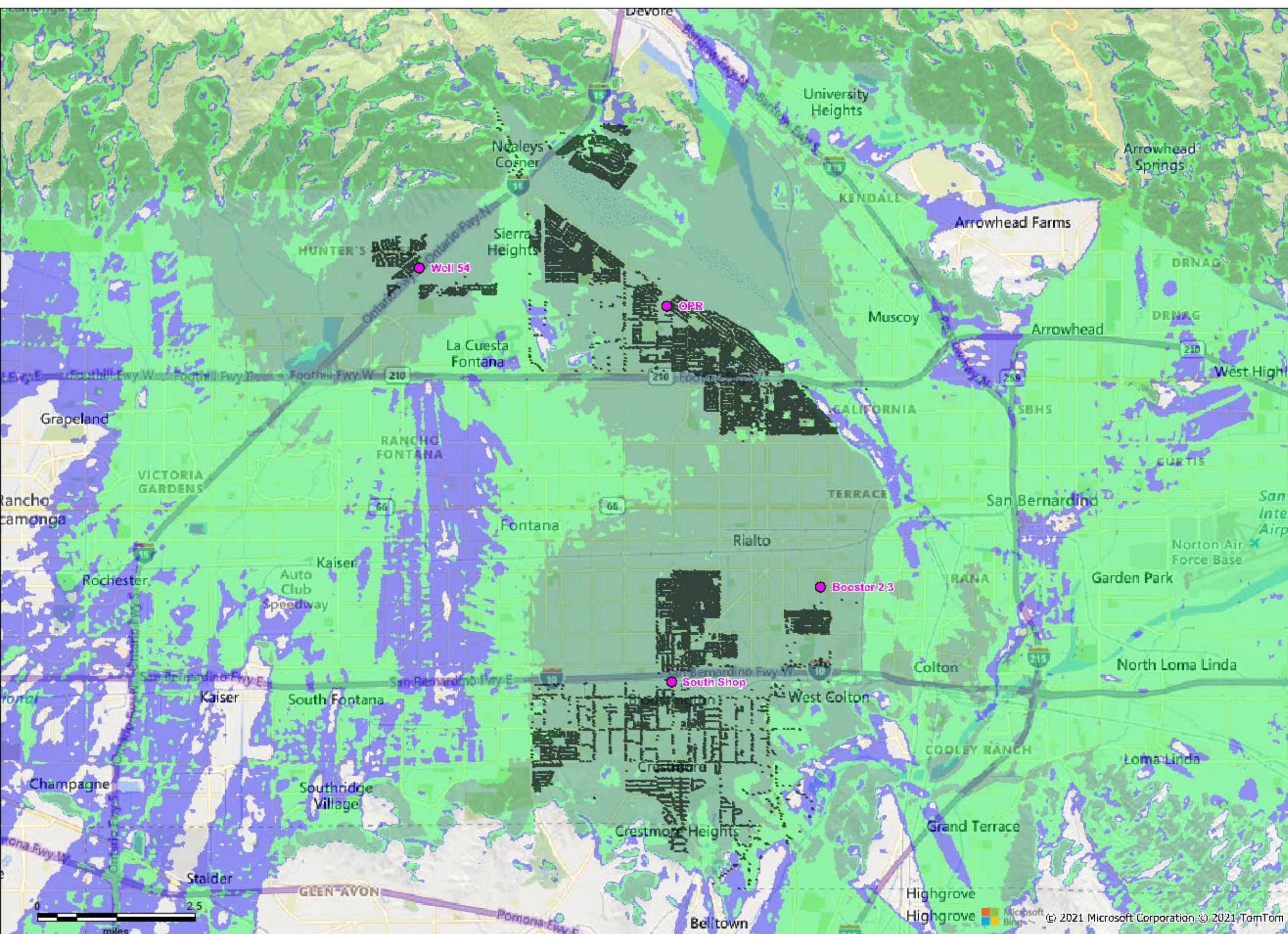
Design Factors

Flex Net Version: V1
 Endpoint Type: Water
 Smart point Location: Pitset
 (above lid)

	Count	%
Total Endpoints Covered	21,167	99.90%
Ally Coverage	19,352	91.33%
2 Way Coverage	20,987	7.71%
1 Way Coverage	180	0.85%
Total Endpoints Analyzed	21,189	

LEGEND

- Ally Coverage
- Two-way Coverage
- One-way Coverage
- Site Location
- Endpoint Location



This propagation study is based on actual information provided by the utility pertaining to meter type, Smart point Location, potential antennae height on structure, structure height, and structure location. Any changes, deletions and/or additions that are not provided to the design engineers during the creation of this design may result in a study that does not correlate to actual field conditions.

Attachment B

Aqua-Metric Quote for
Hardware and
Installation \$139,291.25



August 31, 2022

Aqua-Metric Sales Company

Steve Kamiyama | Account Manager
 4050 Flat Rock Drive | Riverside, CA 92505
 Phone: (951) 233-9545 | Facsimile: (951) 637-1500
steve.kamiyama@aquametric.com

Quote for: West Valley Water District
 Attention: Bill Krueger
 Address:
 City, State, ZIP:
 Phone:
 Email:

Quantity	Description	Unit Price	Line Total
1	OPR Install new OMNI antenna at top of tower on new mast, install new coax (7/8") Install BaseStation on tower with unistrut, install power utilizing existing conduits and sources, Ground coax and BaseStation, and Sweep Test Labor - No Cost to the district per agreement with Sensus		
1	Material - No Cost to the district per agreement with Sensus		
1	South Shop Install new OMNI antenna at top of tower on new mast , Install new coax (7/8") Install BaseStation on tower with unistrut, install power utilizing existing conduits and sources, Ground coax and BaseStation, and Sweep Test Labor	\$5,400.00	\$5,400.00
1	Material	\$4,675.00	\$4,675.00
2	Well 54 and Booster Install new mast above top of tower, install new antenna, install new coax (7/8") Install BaseStation on tower, Trench / intercept existing source, Install power from existing source, Ground coax and BaseStation Labor	\$6,075.00	\$12,150.00
2	Material	\$3,850.00	\$7,700.00
1	M400B2 Sensus BaseStation for OPR - No cost to the district per agreement		
3	M400B2 Sensus BaseStation (South Shop, Well 54, Booster)	\$32,500.00	\$97,500.00
4	Cellular Backhaul Device RV55	\$1,000.00	\$4,000.00

This quote for the product and services named above is subject to the following terms:

1. All quotes are subject to the Aqua-Metric Terms of Sale.
2. Quote is valid until 12/31/22
3. Freight allowed on single orders exceeding \$20,000.00.
4. Net Thirty Days to Pay
5. Returned product may be subject to a 25% restocking fee.
6. Sales Tax is estimated

Subtotal	\$131,425.00
Shipping & Handling	
Sales Tax	\$7,866.25
Total	\$139,291.25

Attachment C

Aqua-Metric Quote for Software
Licensing, Setup, and Training

\$63,025

Annual Licensing \$35,068

(Highlighted in blue)

One-Time Setup and Training

\$27,957

(Highlighted in yellow)

August 25, 2022

Aqua-Metric Sales Company
 Steve Kamiyama | Account Mnager
 4050 Flat Rock Drive | Riverside, CA 92505
 Mobile: (951) 233-9545 | Facsimile: (951) 637-1500

Quote for: West Valley Water District
 Attention: Bill Krueger
 Address:
 City, State, ZIP:
 Phone:
 Email:

Quantity	Description	Unit Price	Line Total
	Year 1 Fees (Up to 12,000 SmartPoints on Network) (Estimated)		
1	Sensus RNI SaaS Fee	\$18,386.00	\$18,386.00
1	Sensus Analytics Enhanced - Water	\$16,682.00	\$16,682.00
1	RNI SaaS Setup Fee (One Time)	\$7,957.00	\$7,957.00
1	Sensus Analytics Setup Fee (One Time)	\$12,500.00	\$12,500.00
1	Standard Analytic Integration Performed by Sensus (One Time)	\$5,000.00	\$5,000.00
1	Sensus Training Remote on RNI and Analytics (One Time)	\$2,500.00	\$2,500.00
	Total Year 1 Fees		\$63,025.00
	Year 2 Fees 15000 SmartPoints on Network (Estimated)		
1	Sensus RNI SaaS Fee	\$23,671.00	\$23,671.00
1	Sensus Analytics Enhanced - Water	\$20,248.00	\$20,248.00
	Year 3 Fees 18000 SmartPoints on Network (Estimated)		
1	Sensus RNI SaaS Fee	\$29,258.00	\$29,258.00
1	Sensus Analytics Enhanced - Water	\$23,837.00	\$23,837.00
	Year 4 Fees 21000 SmartPoints on Network (Estimated)		
1	Sensus RNI SaaS Fee	\$34,967.00	\$34,967.00
1	Sensus Analytics Enhanced - Water	\$27,564.00	\$27,564.00
	Year 5 Fees 24000 SmartPoints on Network (Estimated)		
1	Sensus RNI SaaS Fee	\$36,016.00	\$36,016.00
1	Sensus Analytics Enhanced - Water	\$32,362.00	\$32,362.00
N/A	TBG Extended Maintenance (Starting Year 2) Extended BaseStation Support Per Basestation	\$2,500.00	\$2,500.00

This quote for the product and services named above is subject to the following terms:

1. All quotes are subject to the Aqua-Metric Terms of Sale.
2. Fees Subject to an annual 3% increase
3. Freight allowed on single orders exceeding \$10,000.00.
4. Net Thirty Days to Pay
5. Returned product may be subject to a 25% restocking fee.
6. Sales Tax and/or Freight charges are approximated and may vary on final invoice.

Subtotal
 Shipping & Handling
 Sales Tax
Total

Attachment D

Tyler Technologies Quote for
Software Licensing and Setup

\$5,040



Quoted By: Brandon Swanson
Quote Expiration: 11/19/22
Quote Name: Meter Reader Interface

Sales Quotation For:
West Valley Water District
PO Box 920
Rialto CA 92377-0920
Jon Stephenson
+1 (909) 875-1804,,303
jsteph@wvwd.org

Tyler Software

Description	License Total	Annual Maintenance
ERP Pro powered by Incode		
ERP Pro 10 Customer Relationship Management Suite		
Additional Handheld Meter-Reader Interface	\$ 3,000	\$ 750
TOTAL:	\$ 3,000	\$ 750

Services

Description	Hours/Units	Extended Price	Maintenance
ERP Pro 10 Customer Relationship Management Suite			
Professional Services	8	\$ 1,040	\$ 0
Other Services			
Project Management	1	\$ 250	\$ 0
TOTAL:		\$ 1,290	\$ 0

Summary	One Time Fees	Recurring Fees
Total Tyler Software	\$ 3,000	\$ 750
Total Tyler Services	\$ 1,290	
Summary Total	\$ 4,290	\$ 750
Contract Total	\$ 5,040	

Detailed Breakdown of Professional Services (Included in Summary Total)

Description	Hours	Extended Price	Maintenance
ERP Pro powered by Incode			
ERP Pro 10 Customer Relationship Management Suite			
Additional Handheld Meter-Reader Interface	8	\$ 1,040	\$ 0
<i>Sub-Total</i>	8	\$ 1,040	\$ 0
TOTAL:		\$ 1,040	\$ 0

Comments

- Some services may be delivered remotely via web-based training.
- Expenses associated with onsite services are invoiced as incurred according to Tyler's standard business travel policy.

SaaS is considered a term of one year unless otherwise indicated.

Client agrees that items in this sales quotation are, upon Client's signature or approval of same, hereby added to the existing agreement ("Agreement") between the parties and subject to its terms. Additionally, payment for said items, as applicable but subject to any listed assumptions herein, shall conform to the following terms, subject to payment terms in an agreement, amendment, or similar document in which this sales quotation is included:

- License fees for Tyler and third-party software are invoiced upon the earlier of (i) delivery of the license key or (ii) when Tyler makes such software available accessible.
- Fees for hardware are invoiced upon delivery.
- Fees for year one of hardware maintenance are invoiced upon delivery of the hardware.
- Annual Maintenance and Support fees, SaaS fees, Hosting fees, and Subscription fees are first payable when Tyler makes the software accessible to the Client (for Maintenance) or on the first day of the month following the date this quotation was signed (for SaaS, Hosting, and Subscription), and any such fees are prorated to align with the applicable term under the agreement, with renewals invoiced annually thereafter in accord with the Agreement.
- Fees for services included in this sales quotation shall be invoiced as indicated below.

- o Implementation and other professional services fees shall be invoiced as delivered.
- o Fixed-fee Business Process Consulting services shall be invoiced 50% upon delivery of the Best Practice Recommendations, by module, and 50% upon delivery of custom desktop procedures, by module.
- o Fixed-fee conversions are invoiced 50% upon initial delivery of the converted data, by conversion option, and 50% upon Client acceptance to load the converted data into Live/Production environment, by conversion option. Where conversions are quoted as estimated, Tyler will invoice Client the actual services delivered on a time and materials basis.
- o Except as otherwise provided, other fixed price services are invoiced upon complete delivery of the service. For the avoidance of doubt, where "Project Planning Services" are provided, payment shall be invoiced upon delivery of the Implementation Planning document. Dedicated Project Management services, if any, will be invoiced monthly in arrears, beginning on the first day of the month immediately following initiation of project planning.
- o If Client has purchased any change management services, those services will be invoiced in accordance with the Agreement.
- o Notwithstanding anything to the contrary stated above, the following payment terms shall apply to fees specifically for migrations: Tyler will invoice Client 50% of any Migration Services Fees listed above upon Client approval of the product suite migration schedule. The remaining 50%, by line item, will be billed upon the go-live of the applicable product suite. Tyler will invoice Client for any Project Management Fees listed above upon the go-live of the first product suite. Annual SaaS Fees will be invoiced upon availability of the hosted environment.

Any SaaS or hosted solutions added to an agreement containing Client-hosted Tyler solutions are subject to Tyler’s SaaS Services terms found here: <https://www.tylertech.com/terms/tyler-saas-services>.

Unless otherwise indicated in the contract or amendment thereto, pricing for optional items will be held For six (6) months from the Quote date or the Effective Date of the Contract, whichever is later.

Customer Approval: _____ Date: _____

Print Name: _____ P.O.#: _____