

TO: BOARD OF DIRECTORS

FROM: MARIO E. IGLESIAS
GENERAL MANAGER

DATE: OCTOBER 23, 2020

AGENDA ITEM

E-2

OCTOBER 28, 2020

CONSIDER AUTHORIZING THE GENERAL MANAGER TO DISPENSE WITH COMPETITIVE SOLICITATION REQUIREMENTS FOR THE PURCHASE AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION AND AUTOMATED METER READING SYSTEM

ITEM

Consider authorizing the sole-source purchase and installation of a Sensus distribution leak detection and automated meter reading system that monitors the Nipomo Community Services District ("District") water distribution system for leaks and remotely monitors and reads customer water meters. [RECOMMEND ADOPT RESOLUTION TO AUTHORIZE THE GENERAL MANAGER TO DISPENSE WITH THE COMPETITIVE SOLICITATION REQUIREMENTS FOR THE PURCHASE AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION AND AUTOMATED METER READING SYSTEM AND ENTER INTO A PROFESSIONAL SERVICES AGREEMENT WITH AQUA METRICS FOR THE PURPOSE THEREOF]

BACKGROUND

At your Board's October 14, 2020 Board Meeting, staff presented for your consideration a leak detection program utilizing the Xylem ("Sensus") distribution leak detection and automated meter reading system. That staff report is attached for your reference. At the Board Meeting, staff presented and your Board discussed the recommendation to authorize the General Manager to dispense with the competitive solicitation requirements for the purchase and installation of the Sensus system for reasons outlined in the staff report. The Board concluded that additional information in support of the leak detection program would need to be presented by staff.

In particular, your Board directed staff to focus on the Distribution Leak Detection System component of the Sensus product and provide a cost/benefit analysis. To be included in the analysis were estimates of the total system cost, a timeline for the suggested phasing in of the product, and an estimate of the expected savings the system would yield if installed.

To prepare the Board requested analysis, staff used data from its annual Water Loss Audit Report. The District is required by the Department of Water Resources to file a validated Water Loss Audit Report annually. Staff used the last three years of data, 2017, 2018, and 2019, in the analysis as this data is the most recent available. [NRW = Non-Revenue Water]

Calculate Costs/Savings based on Annual Water Loss Report

Year	Water Production (A)	NRW % (B)	NRW AF (C) = (A x B)	Distr. Leaks % (D)	Distr. Leaks AF (E) = (C x D)	Revenue Loss (F) = (E x \$2,747)
2017	1,990	12.7%		74%		
2018	2,012	12.7%		74%		
2019	1,915	12.8%		50%		
3-Yr AVG	1,972	12.8%	252	67%	168.49	\$462,796

On average, non-revenue water over the three year period is 12.8%. The majority of the 252 acre-feet (AF) identified in the previous table as "NRW AF", stems from water meter inaccuracy and distribution system leaks. Of this total, 67% is attributed to distribution system leaks and represents the \$436,739 under the "Revenue Loss" column. The distribution leak detection system being proposed would focus on reducing the revenue lost to water leaks on the distribution side of the water meter.

The table below suggests a three-year program with an overall water loss reduction from 12.8% to 9.0%. In the table below, "Revenue Loss" represents the amount of revenue that would be collected if all the distribution system water leaks were repaired. This is not achievable, as all water systems have a certain amount of water loss due to leaks. It is reasonable to presume a greater reduction in the lost revenue column with both distribution side and customer side leak detection systems in place. The American Water Works Association identifies water loss through a distribution system between 7% and 15% as an industry norm.

Estimating Savings Opportunity – Program Objective

	Water Production (A)	% NRW (B)	NRW AF (C)=(A x B)	Distri. Leaks % (D)	Distr. Leaks AF (E)=(C x D)	Revenue Loss (F) ¹	Savings (G) ¹
3-Yr AVG	1,972	12.8%	251	67%	168	\$462,796	
Target Yr. 1	1,972	12.0%	237	65%	154	\$422,164	\$40,632
Target Yr. 2	1,972	10.0%	197	58%	114	\$311,888	\$148,983
Target Yr. 3	1,972	9.0%	178	53%	95	\$259,637	\$203,159

A leak detection system only detects leaks. The program will only succeed in reducing water loss if the District budgets for and completes leak repairs. The table below incorporates the estimated cost of repairing two leaks each year and calculates the net savings potential.

NRW Target	Year	System Cost (A)	Distr. Leak Detect (B)	AMI Leak Detect (C)	Investment (D)	15 Year Cost (E) = (A x B)/15	Leak Repairs (F)	Program Cost (G) = (E + F)	Savings (H)	Net Savings (I) = (H - G)
12.8%	2020									
12.0%	2021	\$ 175,000	50%	50%	Initial Installation	\$ 5,833	\$ 30,000	\$ 35,833	\$ 40,632	\$ 4,798

Calculating Net Savings:

1. System Cost (A) multiplied by Distr. Leak Detect % (B) equals Investment (D)
[\$175,000 x 50% = \$87,500]
2. Investment (D) divided by 15 years equal 15 Year Cost (E)
[\$87,500 / 15 yrs = \$5,833]
3. Program Cost (G) equals 15 Year Cost (E) plus Leak Repairs (F)
[\$5,833 + \$30,000 = \$35,833]
4. Savings (H) minus Program Cost (G) equals Net Savings (I)
[\$40,632 - \$35,833 = \$4,798]

The table on the following page incorporates staff's assumptions that: (1) the leak detection system will be a permanent addition to the District's water loss control program; (2) additional equipment will be added to the system, and; (3) a constant 9% non-revenue water factor will be reached and maintained after the third year of the program. Staff is asserting that the volume of water saved is achieved by fixing leaks, and the number of leaks fixed stays constant over the 15-year life-cycle of the system.

	NRW Target	Year	System Cost (A)	Distr. Leak Detect (B)	AMI Leak Detect (C)	Investment (D)	15 Year Cost (E) = (A x B)/15	Leak Repairs (F)	Program Cost (G) = (E + F)	Savings (H)	Net Savings (I) = (H - G)
Currently	12.8%	2020									
15 Year Life Cycle	12.0%	2021	\$ 175,000	50%	50%	Initial Installation	\$ 5,833	\$ 30,000	\$ 35,833	\$ 40,632	\$ 4,798
	10.0%	2022	\$ 25,000	100%		Additional Equip	\$ 30,833	\$ 31,350	\$ 62,183	\$ 148,983	\$ 86,800
	9.0%	2023	\$ -				\$ 5,833	\$ 32,291	\$ 38,124	\$ 203,159	\$ 165,035
	9.0%	2024	\$ -				\$ 5,833	\$ 33,259	\$ 39,093	\$ 210,948	\$ 171,855
	9.0%	2025	\$ 30,000	100%		Additional Equip	\$ 35,833	\$ 49,707	\$ 85,540	\$ 218,503	\$ 132,963
	9.0%	2026	\$ -				\$ 5,833	\$ 51,198	\$ 57,032	\$ 225,832	\$ 168,801
	9.0%	2027	\$ -				\$ 5,833	\$ 52,734	\$ 58,567	\$ 232,941	\$ 174,374
	9.0%	2028	\$ -				\$ 5,833	\$ 54,316	\$ 60,150	\$ 239,837	\$ 179,687
	9.0%	2029	\$ -				\$ 5,833	\$ 55,946	\$ 61,779	\$ 246,525	\$ 184,746
	9.0%	2030	\$ 35,000	100%		Additional Equip	\$ 40,833	\$ 73,074	\$ 113,907	\$ 253,014	\$ 139,106
	9.0%	2031	\$ -				\$ 5,833	\$ 75,266	\$ 81,100	\$ 259,307	\$ 178,207
	9.0%	2032	\$ -				\$ 5,833	\$ 77,524	\$ 83,358	\$ 265,412	\$ 182,054
	9.0%	2033	\$ -				\$ 5,833	\$ 79,850	\$ 85,683	\$ 271,333	\$ 185,650
	9.0%	2034	\$ -				\$ 5,833	\$ 82,245	\$ 88,079	\$ 277,077	\$ 188,998
	9.0%	2035	\$ 40,000	100%		Additional Equip	\$ 45,833	\$ 85,163	\$ 130,996	\$ 282,649	\$ 151,653
	9.0%	2036	\$ -				\$ 5,833	\$ 87,718	\$ 93,551	\$ 288,053	\$ 194,502
		Totals	\$ 305,000				\$ 223,333	\$ 951,641	\$ 1,174,975	\$ 3,664,204	\$ 2,489,229

Note 1: 2 Leaks/Yr, Estimate \$15,000 per leak repair with 3% escalator for subsequent Years

Staff recognizes the number of leaks detected by the proposed leak detection system, as well as the amount of water saved each year, is an estimate. There will be additional efforts to control water loss in the distribution system, including the cost of replacing water mains that have chronic failures. As water mains are identified and replaced, it is anticipated that the number of leaks could be reduced, though it is accepted that leaks will continue to develop in the distribution system over time. The distribution leak detection system will limit the amount of time leaks go undetected, which will then limit the amount of water loss and ultimately save the community the cost that goes along with that.

FISCAL IMPACT

Staff has budgeted \$165,000 in the current year budget. The price quote from the vendor is \$173,390.72. There is sufficient funding in the Water Fund to make up the \$8,000 difference. Staff time to manage and oversee the project is included in the budget – there is no construction management agent or fee for this project.

STRATEGIC PLAN

Goal 4. FINANCE. Maintain conservative, long-term financial management to minimize rate impacts on customers while meeting program financial needs.

A.2 Ensure billing processes are efficient, cost-effective and fair. Evaluate the potential costs and benefits of monthly compared to bi-monthly billing.

Goal 5. OPERATIONS. Maintain a proactive program to ensure readiness of systems and cost-effectiveness of operations.

A.1 Ensure efficiency and effectiveness in operations, including evaluating Automated Meter Reading.

A.2 Utilize metrics for measuring operational effectiveness to ensure improvements in reliability, and cost-effectiveness of operations and maintenance.

Goal 6. GOVERNANCE AND ADMINISTRATION. Conduct District activities in an efficient, equitable and cost-effective manner.

B.1 Utilize technology to maximize productivity and communications.

B.2 Provide excellent customer service.

RECOMMENDATION

Recommend your Board discuss the implementation of the proposed Leak Detection System and Automated Meter Reading system, and authorize the General Manager to enter into a professional services agreement with Aqua Metrics, dispensing with the competitive solicitation required for the purchase and installation of said systems.

ATTACHMENTS

- A. NCSD Staff Report – October 14, 2020, PURCHASE AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION
- B. Resolution 2020-XXXX, Authorize General Manager to Dispense with Competitive Solicitation
- C. Professional Service Agreement between NCSD and Aqua Metrics
- D. Presentation – Xylem: Acoustic Monitoring & Permalog
- E. Presentation – NCSD: Determining the Value of Leak Detection

OCTOBER 28, 2020

ITEM E-2

ATTACHMENT A

TO: BOARD OF DIRECTORS
FROM: MARIO E. IGLESIAS
GENERAL MANAGER
DATE: October 8, 2020

**AGENDA ITEM
E-1
OCTOBER 14, 2020**

**CONSIDER AUTHORIZING THE GENERAL MANAGER TO
DISPENSE WITH COMPETITIVE SOLICITATION REQUIREMENTS
FOR THE PURCHASE AND INSTALLATION OF
THE SENSUS DISTRIBUTION LEAK DETECTION AND
AUTOMATED METER READING SYSTEM**

ITEM

Consider authorizing the sole-source purchase and installation of a Sensus distribution leak detection and automated meter reading system that monitors the Nipomo Community Services District ("District") water distribution system for leaks and remotely monitors and reads customer water meters. [RECOMMEND ADOPT RESOLUTION AUTHORIZE THE GENERAL MANAGER TO DISPENSE WITH COMPETITIVE SOLICITATION REQUIREMENTS FOR THE PURCHASE AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION AND AUTOMATED METER READING SYSTEM AND ENTER INTO AN PROFESSIONAL SERVICES AGREEMENT WITH AQUA METRICS FOR THE PURPOSE THERE OF]

BACKGROUND

Water loss through leaks in the District's water distribution system make up the majority of the non-revenue water ("NRW") reported on the District annual Water Loss Audit Report ("WLAR"). Since 2016, the District has been required to complete a WLAR and submit a validated copy of this report to the Department of Water Resources ("DWR"). The purpose of the WLAR is to assist water purveyors in identifying economic strategies that focus on reducing NRW by developing a strong understanding of what elements drive water loss in their systems and the costs associated with not taking actions to address these losses.

Reducing the percentage of water lost through leaking water mains will save water and money. Over the last 4 years, the District's NRW has averaged 10%. The American Water Association ("AWWA") and the International Water Association ("IWA") are industry standards development organizations recognized around the world as the water industry leaders. According to extensive research from these organizations, water distribution systems average 7 to 15 percent of non-revenue water and much of that is due to water loss through leaking distribution water mains, customer service lines, and meter inaccuracy. Incorporating a leak detection system on the District water distribution system will give the water operations team a significant tool for tracking down water leaks and getting them repaired.

A complete automated Leak Detection System ("LDS") and Automatic Meter Reading ("AMR") system is comprised of two distinct elements, a wireless network for communication and field devices or nodes that monitor pipelines and meters. Examples of nodes are water meters, pressure sensors, and leak detection devices. The wireless network used for systems communication can be carried on a licensed or unlicensed frequency.

Leak Detection Saves Water

Failures in the water distribution and delivery systems result in lost water. The water distribution system is made up of water mains, valves, and service lines. The water delivery system consists

of water meters and customer service lines. All these facilities are underground and out of sight. Water loss through leaks in these underground water pipelines can go undetected for significant periods of time. Detecting leaks when they happen will save water that can be put to beneficial use.

Leak Detection Saves Money

The proposed leak detection system is capable of monitoring District distribution systems and customer delivery systems. Water lost through the District distribution system increases the amount of purchased water imported onto the Nipomo Mesa and increases energy costs for pumping additional ground water. The proposed leak detection system saves customers' money by reducing the percentage of non-revenue water lost to leaks as they are more readily identified and repaired.

The Leak Detection System ("LDS") Automated Meter Reading ("AMR") Work Together

The District reads each customers' water meter every other month. This provides a limited view of water use on the property. This frequency of meter reading is intended only to determine the user's consumption level for billing purposes. Should the customers' system develop a water leak shortly after its bimonthly read, it could be 60 days before the leak is detected.

The operating platform for the proposed LDS and AMR system is able to integrate with the District's Sensus water meters. With an AMR solution, customers receive a proactive monitoring system that allows for ongoing leak detection at their water meter. The District will be able to provide consumers with a leak alert and an hour-by-hour history of their water usage. This tool can alert customers of unintended usage such as irrigation systems that are left on during winter months, leaking underground water lines, or unauthorized water use on their property. With over 600 of the District's 4,600 water meter registers already equipped to accept a Sensus radio, the District will be able to utilize the AMR portion of the system for about 15% of the Districts customer base with the adaptation and installation of a Sensus End-Point (radio).

An AMR system gives value to and enhances the customers' service experience by providing information and service that helps to educate and empower customers. The proposed LDS fully supports an AMR implementation strategy for the District. Part of the overall leak detection strategy is to provide an online web-based portal that provides customers with access to help monitor their own water usage and set alarms they control. The District can set general usage alarms and automatically watch over possible leaks through the built-in alarm features. The customer portal option would be evaluated for a future phase deployment and a measure of customer acceptance of the technology would need to be demonstrated before the District commits to the cost of the customer portal feature. However, regardless of the customer portal, the District will be able to take advantage of these leak monitoring services from the beginning.

Phased in Approach

The District is looking to institute a full range of leak detection technology, starting first with the intent of monitoring the water distribution system and a limited number of meters that are ready to accept a Sensus End-Point. The first phase includes setting up the communications network and installing a limited number of monitoring nodes – distribution leak detection devices and AMR capable water meters. With completion of this first phase, an ongoing meter aging program will migrate non-AMR water meters out of the District's meter inventory and replace them with new AMR capable water meters over the course of time. Staff will evaluate energy and resource grant program opportunities that would accelerate full deployment of the AMI system and will bring these opportunities to your Board for consideration when available.

Sole-source Purchase

A sole-source purchase option is being proposed by staff for the Sensus system for several reasons. First, the Sensus system is the only system in the industry that communicates on a licensed radio frequency. The licensed frequency is protected by regulations and so the frequency is protected from interference from other users making for a more secure and dependable communications platform. Second, the Sensus system only needs two towers to reach all the District's water meters. All other LDS and AMR technology systems require towers every square mile at a minimum. These multiple towers require site acquisition and power to support them, making the cost and the logistics higher and more difficult to obtain full coverage of a service area.

The LDS and AMR project described above is the first phase of a multiphase program that establishes a communication platform for leak detection of the District's distribution water mains and the customer's meter and service lines. As stated above, the proposed system exceeds the limits of simply reading water meters – it is a comprehensive water distribution leak detection solution. The LDS and AMR system together combines monitoring hardware, controlling software, and a wireless communication network that provides the District and its customers with a package of sophisticated analytical tools that are presented in a user friendly web-based environment. AMR is a customer service tool that proactively reduces the cost of service by eliminating man-hours for meter reading and reducing man-hours for meter service calls.

Staff seeks approval from your Board to advance the LDS and AMR framework. As expressed above, staff would ask your Board to authorize the purchase and installation of a licensed fixed base radio network ("Fixed Base") manufactured by Sensus. Staff is recommending a sole-source purchase agreement for a licensed Sensus Fixed Base system as it provides unique and essential features advantageous to the District not available from other manufacturers. Specifically, those features are:

Licensed Frequency

Sensus is the only Fixed Base LDS and AMR manufacturer that has a licensed frequency based communication network. Other manufacturers use unlicensed frequencies that are shared by a host of technologies from garage door openers, local wireless networks to cordless telephones. The interference from these devices can hamper the data through-put speed and quality compromising the capability of AMI.

Licensed frequencies are permitted to transmit at a higher power output. With higher power outputs, a licensed frequency system is more reliable and reaches field nodes shadowed by trees and structures. Licensed frequencies are protected by the Federal Communications Commission.

Limited Collectors

The Sensus Fixed Base system only requires two radio transmit/receive stations ("Collectors") to cover the District's service area. Non-licensed systems will require more than a dozen Collectors to cover the same area. Non-licensed systems must be within a line of sight from one another and in the absence of District owned street light stances or other antenna, it would be challenging to install a non-licensed systems. The District would need to enter into long term agreements with private property owners and/or the County for right-of-ways to install a host of antennas in the District's service area.

Compatibility

There are Fixed Base compatibility advantages in Sensus products. The District's water meter inventory has developed over twenty years to include water meters from various meter

manufacturers with no one manufacturer's product specified by the District. The District has nearly 600 Sensus meters currently deployed that are adaptable with the addition of a plug-and-play radio to Sensus communication platform.

Proven Reliability

The City of Santa Maria has been utilizing Sensus AMI for over nine years. The Utility Department Manager is satisfied with the product from the licensed frequency designed, customer support, collector reliability, and to the meters and transmitters attached to the meters. There are hundreds of scaled up Sensus AMR deployments that have proven reliability. No other AMR manufacturer has more active systems than Sensus.

FISCAL IMPACT

Staff has included \$165,000 in the current year budget. The price quote from the vendor is \$173,390.72. There is sufficient funding in the Water Fund to make up the \$8,000 difference. Staff time to manage and oversee the project is included in the budget – there is no construction management agent or fee for this project.

STRATEGIC PLAN

Goal 4. FINANCE. Maintain conservative, long-term financial management to minimize rate impacts on customers while meeting program financial needs.

A.2 Ensure billing processes are efficient, cost-effective and fair. Evaluate the potential costs and benefits of monthly compared to bi-monthly billing.

Goal 5. OPERATIONS. Maintain a proactive program to ensure readiness of systems and cost-effectiveness of operations.

A.1 Ensure efficiency and effectiveness in operations, including evaluating Automated Meter Reading.

A.2 Utilize metrics for measuring operational effectiveness to ensure improvements in reliability, and cost-effectiveness of operations and maintenance.

Goal 6. GOVERNANCE AND ADMINISTRATION. Conduct District activities in an efficient, equitable and cost-effective manner.

B.1 Utilize technology to maximize productivity and communications.

B.2 Provide excellent customer service.

RECOMMENDATION

Recommend your Board discuss the implementation of the proposed Leak Detection System and Automated Meter Reading system, and authorize the General Manager to enter into a professional services agreement with Aqua Metrics, dispensing with the competitive solicitation required for the purchase and installation of said systems.

ATTACHMENTS

A. Resolution 2020-XXXX, Authorize General Manager to Dispense with Competitive Solicitation

B. Professional Service Agreement between NCSD and Aqua Metrics

OCTOBER 28, 2020

ITEM E-2

ATTACHMENT B

**NIPOMO COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 2020-_____**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
NIPOMO COMMUNITY SERVICES DISTRICT AUTHORIZING THE GENERAL MANAGER TO
DISPENSE WITH COMPETITIVE SOLICITATION REQUIREMENTS FOR THE PURCHASE
AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION AND
AUTOMATED METER READING SYSTEM**

WHEREAS, following best practices as a public entity, Nipomo Community Services District ("NCSD") has a purchasing policy and procedures for obtaining goods and services; and

WHEREAS, NCSD's purchasing policy and procedures ensure that NCSD obtains goods and services on the open market, where possible, pursuant to rules that ensure transparency, fairness to all bidders and suppliers, and decisions that are made free from conflicts of interest; and

WHEREAS, NCSD's current Purchasing Policy and Procedures ("Policy"), as updated in 2020, generally requires competitive solicitations for the purchase of goods and services, depending on the amount of the proposed purchase; and

WHEREAS, Section 3.4 of the Policy permits the Board, by Resolution, to authorize staff to dispense with competitive solicitation processes in specialized circumstances.

NOW, THEREFORE, BE IT RESOLVED, DETERMINED AND ORDERED by the Board of Directors of the Nipomo Community Services District, as follows:

1. The facts and findings stated above are true and correct to the best of its knowledge and incorporated herein.
2. Pursuant to Section 3.4 of the Policy, the General Manager is hereby authorized to dispense with competitive solicitation requirements for the District's purchase of the Sensus Distribution Leak Detection and Automated Meter Reading System ("System") based on the following findings, to the best of the its knowledge based on information provided in the staff report:
 - a) The purchase price is reasonable; and
 - b) The System is the only one that will properly meet the needs of the NCSD because the item is unique and available only from one source, in that Sensus is the only Fixed Base Leak Detection System and Automated Meter Reading manufacturer that has a licensed frequency based communication network. Other manufacturers use unlicensed frequencies that are shared by a host of technologies from garage door openers, local wireless networks to cordless telephones. The interference from these devices can hamper the data through-put speed and quality; and
 - c) The System is unique in that it only requires two radio transmit/receive stations ("Collectors") to cover the District's service area. Non-licensed systems will require more than a dozen Collectors to cover the same area. Non-licensed systems must be within a line of sight from one another and in the absence of District owned street light stances or other antenna, it would be challenging to install a non-licensed system.

**NIPOMO COMMUNITY SERVICES DISTRICT
RESOLUTION NO. 2020-_____**

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE
NIPOMO COMMUNITY SERVICES DISTRICT AUTHORIZING THE GENERAL MANAGER TO
DISPENSE WITH COMPETITIVE SOLICITATION REQUIREMENTS FOR THE PURCHASE
AND INSTALLATION OF THE SENSUS DISTRIBUTION LEAK DETECTION AND
AUTOMATED METER READING SYSTEM**

Upon motion by Director _____, seconded by Director _____, on the following roll call vote, to wit:

AYES:

NOES:

ABSENT:

ABSTAIN:

the foregoing resolution is hereby passed and adopted this ____ day of _____, 2020.

DAN ALLEN GADDIS
President of the Board

ATTEST:

APPROVED AS TO FORM:

MARIO IGLESIAS
General Manager and
Secretary to the Board

CRAIG A. STEELE
District Legal Counsel

OCTOBER 28, 2020

ITEM E-2

ATTACHMENT C

PROFESSIONAL SERVICES AGREEMENT

(Sensus Leak Detection System)

This Professional Services Agreement ("Agreement"), is made and effective as of [____], between the Nipomo Community Services District ("District"), a California special district, and [Aqua Metric], a California corporation ("Consultant"). Individually and collectively, District and Consultant are referenced herein as "Party" or "Parties," respectively. In consideration of the mutual covenants and conditions set forth herein, the Parties agree as follows:

1. TERM

This Agreement shall commence on [____] and shall remain and continue in effect until tasks described herein are completed, but in no event later than [____], unless sooner terminated pursuant to the provisions of this Agreement.

2. SERVICES

Consultant shall perform the tasks described and set forth in Exhibit A, attached hereto and incorporated herein as though set forth in full ("Scope of Work"). Consultant shall complete the tasks according to the schedule of performance which is also set forth in Exhibit A. To the extent that Exhibit A is a proposal from Consultant, such proposal is incorporated only for the description of the scope of services and the schedule of performance, and no other terms and conditions from any such proposal shall apply to this Agreement unless specifically stated herein.

3. PERFORMANCE

Consultant represents that it has the skills, expertise, and licenses necessary to perform the services required under this Agreement. Consultant shall perform all such services in the manner and according to the standards observed by professionals experienced in providing the services identified in Exhibit A. All documents and services of whatsoever nature that Consultant delivers to District pursuant to this Agreement shall conform to the standards of quality normally observed by professionals experienced in providing services identified in Exhibit A. Consultant shall promptly correct or revise any errors or omissions in its performance of the services identified in Exhibit A at District's request without additional compensation. Licenses required to perform such services shall be obtained and maintained by Consultant without additional compensation throughout the term of this Agreement.

4. DISTRICT MANAGEMENT

District's General Manager ("General Manager") shall represent District in all matters pertaining to the administration of this Agreement, including review and approval of all products submitted by Consultant but not including the authority to enlarge the Scope of Work or to change the compensation due to Consultant except as provided in Section 5 hereof.

5. PAYMENT

- A. The District agrees to pay Consultant monthly, in accordance with the payment rates and terms and the schedule of payment as set forth in Exhibit B, attached hereto and incorporated herein by this reference as though set forth in full, based upon actual time spent on the Scope of Work. This amount shall not exceed [One-hundred-seventy-two thousand, one-hundred and sixty-five] dollars (\$172,165) ("Not-To-Exceed Amount") for the total term of the Agreement, unless additional payment is approved as provided in this Agreement.
- B. Consultant shall not be compensated for any services rendered in connection with its performance of this Agreement which are in addition to those set forth herein, unless such additional services are authorized in advance and in writing by the District. The General Manager may approve additional work not to exceed ten-thousand dollars (\$10,000.00). Any additional work in excess of this amount shall be approved by the District Board of Directors. In order for District to increase the Not-To-Exceed Amount, Consultant must timely, and prior to sixty percent (60%) completion of the Scope of Work, identify and document how circumstances beyond its reasonable control have increased the time and/or costs of performing the Services beyond the amounts identified in Exhibit B. The District, in its sole discretion, may deny in part or in whole a request to increase the Not to Exceed Amount, modify the Scope of Work, or modify the schedule for completion of the Scope of Work. Consultant shall be compensated for any additional services in the amounts and in the manner as agreed to by the General Manager and Consultant at the time District's written authorization is given to Consultant for the performance of said services.
- C. Consultant will submit invoices monthly for actual services performed. Invoices shall be submitted on or about the first business day of each month, or as soon thereafter as practical, for services provided in the previous month. Payment shall be made within thirty (30) days of receipt of each invoice as to all non-disputed fees. If the District disputes any of Consultant's fees it shall give written notice to Consultant within thirty (30) days of receipt of the invoice that includes the disputed fees.

- D. Payment of an invoice by District shall not constitute acceptance of defective performance, and District's failure to discover or object to any unsatisfactory services, performance, or billing prior to payment will not constitute a waiver of District's right to require Consultant to correct such work or billings or to seek any other legal remedy.
- E. District may withhold, or on account of subsequently discovered evidence nullify, the whole or a part of any payment to such extent as may be necessary to protect District from loss, including costs and attorneys' fees, on account of (1) defective or deficient work product not remedied; (2) subsequently discovered errors in invoices previously paid; (3) claims filed or reasonable evidence indicating probable filing of a claim or claims; (4) failure of Consultant to make payments properly to its employees or sub-consultants; or (5) Consultant's failure to adhere to the schedule of performance or to achieve sufficient progress with the Scope of Work such that Consultant is unlikely to achieve timely completion.

6. MODIFICATIONS, AMENDMENTS AND CHANGE ORDERS.

No modification or amendment to this Agreement or the work herein shall be binding upon either party hereto unless such amendment is set forth in writing and duly executed by an authorized representative of each party. District and Consultant each acknowledge additional product and services not detailed or described herein may be required to complete the Work. Either party may initiate a request to modify, add or remove additional product or services. No additional product or service will be inclusive unless upon written amendment to this Agreement duly executed by an authorized representative from both parties. Unless otherwise agreed upon, all additional product or services rendered will be quoted at current market values at the time of request.

7. SUSPENSION OR TERMINATION OF AGREEMENT WITHOUT CAUSE

- A. The District may at any time, for any reason, with or without cause, suspend or terminate this Agreement, or any portion hereof, by providing written notice to Consultant at least ten (10) days prior to the effective date of the suspension or termination. Upon receipt of said notice, the Consultant shall immediately cease all work under this Agreement, unless the notice provides otherwise. If the District suspends or terminates a portion of this Agreement, the remainder of this Agreement shall remain in full force and effect.
- B. In the event this Agreement is terminated pursuant to this Section, the District shall pay to Consultant the actual value of the work performed up to the time of termination, including the applicable portion of the annual fees charged by Consultant to District for software and services necessary to operate and maintain the Sensus FlexNet system, provided that the work performed is of value to the District. Upon termination of the

Agreement pursuant to this Section 6, the Consultant will submit an invoice to the District pursuant to Section 5.

8. DEFAULT OF CONSULTANT

- A. Consultant's failure to comply with the provisions of this Agreement shall constitute a default. In addition, if Consultant at any time refuses or neglects to perform the Services in a reasonably timely fashion in accordance with the schedule referenced in Exhibit A, or is adjudicated bankrupt, or commits any act of insolvency, or makes an assignment for the benefit of creditors without District's written consent, or fails to make prompt payment to persons furnishing labor, equipment, or materials, or fails in any respect to properly and diligently prosecute the Scope of Work, or otherwise fails to perform fully any and all of the Agreements or terms herein contained, Consultant shall be in default.
- B. In the event that Consultant is in default for cause under the terms of this Agreement, District shall have no obligation or duty to continue compensating Consultant for any work performed after the date of default and can terminate this Agreement immediately by written notice to Consultant. If such failure by Consultant to make progress in the performance of work hereunder arises out of causes beyond Consultant's control, and without fault or negligence of Consultant, it shall not be considered a default.
- C. Notwithstanding the foregoing, neither party shall be held liable to the other for delay in fulfilling or failure to fulfill its obligations under this Agreement, if such delay or failure is caused by:
 - a. Force majeure events beyond the reasonable control of such party, including, without limitation, natural calamity, acts of God, terrorist events, pandemic, or delays in product shipment caused by any of the preceding events, provided payment obligations shall not be so excused. The party claiming its performance is delayed by such an event shall promptly notify the other in writing of the nature and extent of a situation that may delay or prevent performance under the terms and conditions of this Agreement; or
 - b. An unexpected delay related to the setup and configuration of the RNI/Sensus Analytics, and integration with the District's billing software provider.
 - c. If Consultant fails to perform as a result of an occurrence described in this Section 8(C), the termination provisions of Section 7(B) shall apply.
- D. The Parties agree to reasonably extend the completion date as necessary to accommodate for any planned or unplanned delay(s) or suspension(s)

resulting from the events set forth in Section C above. The number of days extended to the Completion Date shall not exceed the total number of days delayed or suspended.

- E. If the General Manager or his/her designee determines that Consultant is in default in the performance of any of the terms or conditions of this Agreement, he/she shall cause to be served upon the Consultant a written notice of the default. Consultant shall have ten (10) days after service upon it of said notice in which to cure the default by rendering a satisfactory performance. In the event that the Consultant fails to cure its default within such period of time or, if appropriate as determined by District, fails to present the District with a written plan for the cure of the default, the District shall have the right, notwithstanding any other provision of this Agreement, to terminate this Agreement without further notice and without prejudice to any other remedy to which it may be entitled at law, in equity, or under this Agreement.

9. DOCUMENTS

- A. Consultant shall maintain complete and accurate records with respect to sales, costs, expenses, receipts, and other such information required by District that relate to the performance of services under this Agreement. Consultant shall maintain adequate records of services provided in sufficient detail to permit an evaluation of services. All such records shall be maintained in accordance with generally accepted accounting principles and shall be clearly identified and readily accessible. Consultant shall provide free access to the representatives of District or its designees at reasonable times to such books and records; shall give District the right to examine and audit said books and records; shall permit District to make transcripts or copies therefrom as necessary; and shall allow inspection of all work, data, documents, proceedings, and activities related to this Agreement. Such records, together with supporting documents, shall be maintained for a period of three (3) years after receipt of final payment.
- B. Upon completion of, or in the event of termination or suspension of this Agreement, all original documents, designs, drawings, maps, models, computer files, surveys, notes, and other documents prepared in the course of providing the services to be performed pursuant to this Agreement shall become the sole property of the District and may be used, reused, or otherwise disposed of by the District without the permission of the Consultant. With respect to computer files, Consultant shall make available to the District, at the Consultant's office and upon reasonable written request by the District, the necessary computer software and hardware for purposes of accessing, compiling, transferring, copying, and/or printing computer files. Consultant hereby grants to District all right, title, and interest, including any copyright, in and to the documents, designs, drawings, maps, models, computer files, surveys,

notes, and other documents prepared by Consultant in the course of providing the services under this Agreement.

10. INDEMNIFICATION

A. Indemnity for professional liability

When the law establishes a professional standard of care for Consultant's Services, to the fullest extent permitted by law, Consultant shall indemnify, protect, defend, and hold harmless District and any and all of its officials, employees, and agents ("Indemnified Parties") from and against any and all losses, liabilities, damages, costs, and expenses, including legal counsel's fees and costs, caused in whole or in part by any negligent or wrongful act, error, or omission of Consultant, its officers, agents, employees, or subconsultants in the performance of professional services under this Agreement.

B. Indemnity for other than professional liability

Other than in the performance of professional services and to the full extent permitted by law, Consultant shall indemnify, defend, and hold harmless District, and any and all of its employees, officials, and agents from and against any liability, claim, suit, action, arbitration proceeding, administrative proceeding, regulatory proceeding, loss, expense, or cost of any kind, whether actual, alleged, or threatened, including legal counsel fees and costs, court costs, interest, defense costs, and expert witness fees, arising out of, a consequence of, or in any way attributable to, in whole or in part, the performance of this Agreement by Consultant or by any individual or entity for which Consultant is legally liable, including but not limited to officers, agents, employees, or subcontractors of Consultant.

C. Duty to defend

In the event the District, its officers, employees, agents, and/or volunteers are made a party to any action, lawsuit, or other adversarial proceeding arising from the performance of the services encompassed by this Agreement, and upon demand by District, Consultant shall have an immediate duty to defend the District at Consultant's cost or at District's option, to reimburse District for its costs of defense, including reasonable attorney's fees and costs incurred in the defense of such matters.

Payment by District is not a condition precedent to enforcement of this obligation. In the event of any dispute between Consultant and District as to whether liability arises from the sole negligence of the District or its officers, employees, or agents, Consultant will be obligated to pay for District's defense until such time as a final judgment has been entered adjudicating the District as solely negligent. Consultant will not be entitled in the absence of such a determination to any reimbursement of defense

costs, including but not limited to attorney's fees, expert fees, or costs of litigation.

D. Survival

The duty to defend and indemnify the District and each of the obligations contained in this Section 9 shall survive termination or expiration of this Agreement.

11. INSURANCE

Consultant shall maintain prior to the beginning of and for the duration of this Agreement insurance coverage as specified in Exhibit C attached to and part of this Agreement.

12. INDEPENDENT CONTRACTOR

- A. Consultant is and shall at all times remain as to the District a wholly independent consultant and/or independent contractor. The personnel performing the services under this Agreement on behalf of Consultant shall at all times be under Consultant's exclusive direction and control. Neither District nor any of its officers, employees, or agents shall have control over the conduct of Consultant or any of Consultant's officers, employees, or agents, except as set forth in this Agreement. Consultant shall not at any time or in any manner represent that it or any of its officers, employees, or agents are in any manner officers, employees, or agents of the District. Consultant shall not incur or have the power to incur any debt, obligation, or liability whatever against District, or bind District in any manner.
- B. No employee benefits shall be available to Consultant in connection with the performance of this Agreement. Except for the fees paid to Consultant as provided in the Agreement, District shall not pay salaries, wages, or other compensation to Consultant for performing services hereunder for District. District shall not be liable for compensation or indemnification to Consultant for injury or sickness arising out of performing services hereunder.

13. LEGAL RESPONSIBILITIES

The Consultant shall keep itself informed of State, Federal, and local laws and regulations which in any manner affect those employed by it or in any way affect the performance of its service pursuant to this Agreement. Consultant shall (and shall cause its agents and sub-contractors), at its sole cost and expense, to comply with all State, Federal, and local laws, ordinances, and regulations now in force or which may hereafter be in force with regard to the services referenced in Exhibit A and with regard to this Agreement including, without limitation, the

payment of prevailing wages as required by California Labor Code Section 1770, et. seq. The judgment of any court of competent jurisdiction, or the admission of Consultant in any action or proceeding against Consultant, whether District be a party thereto or not, that Consultant has violated any such law shall be conclusive of that fact as between Consultant and District. Any corrections to Consultant's services which become necessary as a result of the Consultant's failure to comply with these requirements shall be made at Consultant's expense. The District, and its officers and employees, shall not be liable at law or in equity by failure of the Consultant to comply with this Section.

14. NON-LIABILITY OF DISTRICT OFFICERS AND EMPLOYEES

No officer or employee of District will be personally liable to Consultant in the event of any default or breach by District or for any amount that may become due to Consultant.

15. UNDUE INFLUENCE

Consultant declares and warrants that no undue influence or pressure was or will be used against or in concert with any officer or employee of the District in connection with the award, terms, or implementation of this Agreement, including any method of coercion, confidential financial arrangement, or financial inducement. No officer or employee of the District has or will receive compensation, directly or indirectly, from Consultant, or from any officer, employee or agent of Consultant, in connection with the award of this Agreement or any work to be conducted as a result of this Agreement. Violation of this Section shall be a material breach of this Agreement entitling the District to any and all remedies at law or in equity.

16. NON-DISCRIMINATION

Consultant shall not discriminate in any way against any person on the basis of race, color, religious creed, national origin, ancestry, sex, age, physical handicap, medical condition or marital status in connection with, or related to, the performance of this Agreement.

17. TAXES

Consultant shall pay all taxes, assessments, and premiums under the federal Social Security Act, any applicable unemployment insurance contributions, Workers Compensation insurance premiums, sales taxes, use taxes, personal property taxes, or other taxes or assessments now or hereafter in effect and payable by reason of or in connection with the services to be performed by Consultant.

18. RELEASE OF INFORMATION

- A. All information gained by Consultant in performance of this Agreement shall be considered confidential and shall not be released by Consultant without District's prior written authorization. Consultant, its officers, employees, agents, or subconsultants, shall not without written authorization from the General Manager or unless requested by the District's attorney, voluntarily provide declarations, letters of support, testimony at depositions, response to interrogatories, or other information concerning the work performed under this Agreement or relating to any project or property located within the District. Response to a subpoena or court order shall not be considered "voluntary," provided Consultant gives District notice of such court order or subpoena.
- B. Consultant shall promptly notify District should Consultant, its officers, employees, agents, or subconsultants be served with any summons, complaint, subpoena, notice of deposition, request for documents, interrogatories, request for admissions, or other discovery request ("Discovery"), court order, or subpoena from any person or party regarding this Agreement or the work performed hereunder or with respect to any project or property located within the District, unless the District is a party to any lawsuit, arbitration, or administrative proceeding connected to such Discovery, or unless Consultant is prohibited by law from informing the District of such Discovery. District retains the right, but has no obligation, to represent Consultant and/or be present at any deposition, hearing, or similar proceeding as allowed by law. Unless District is a party to the lawsuit, arbitration, or administrative proceeding and is adverse to Consultant in such proceeding, Consultant agrees to cooperate fully with District and to provide the opportunity to review any response to discovery requests provided by Consultant. However, District's right to review any such response does not imply or mean the right by District to control, direct, or rewrite said response.

19. CONFLICTS OF INTEREST

Consultant covenants that neither he/she nor any officer or principal of their firm have any interest in, or shall acquire any interest, directly or indirectly, which will conflict in any manner or degree with the performance of their services hereunder. Consultant further covenants that in the performance of this Agreement, no person having such interest shall be employed by them as an officer, employee, agent, or subconsultant. Consultant further covenants that Consultant has not contracted with nor is performing any services, directly or indirectly, with any developer(s) and/or property owner(s) and/or firm(s) and/or partnership(s) owning property in the study area and further covenants and agrees that Consultant and/or its subconsultants shall provide no service or enter into any agreement or agreements with a/any developer(s) and/or property

owner(s) and/or firm(s) and/or partnership(s) owning property in the study area prior to the completion of the work under this Agreement.

20. NOTICES

Any notices which either party may desire to give to the other party under this Agreement must be in writing and may be given either by (i) personal service, (ii) delivery by a reputable document delivery service, such as but not limited to, Federal Express, which provides a receipt showing date and time of delivery, or (iii) mailing in the United States Mail, certified mail, postage prepaid, return receipt requested, addressed to the address of the party as set forth below or at any other address as that party may later designate by notice:

To District: Nipomo Community Services District
148 South Wilson Street
Nipomo, CA 93444
Attention: General Manager

To Consultant: Aqua-Metric Sales Company
Attn: Tommy Thirkettle
4050 Flat Rock Drive
Riverside, CA 92505

21. ASSIGNMENT

The Consultant shall not assign the performance of this Agreement, nor any part thereof, nor any monies due hereunder, without prior written consent of the District. Because of the personal nature of the services to be rendered pursuant to this Agreement, only Consultant shall perform the services described in this Agreement. Before retaining or contracting with any subconsultant for any services under this Agreement, Consultant shall provide District with the identity of the proposed subconsultant, a copy of the proposed written contract between Consultant and such subconsultant which shall include the same indemnity provision as the one provided herein identifying District as an indemnified party, or an incorporation of the indemnity provision provided herein, and proof that such proposed subconsultant carries insurance at least equal to that required by this Agreement or obtain a written waiver from District for such insurance.

22. LICENSES AND PERMITS

At all times during the term of this Agreement, Consultant shall have in full force and effect, all licenses and permits required of it by federal, state, or local laws or regulations for the performance of the services described in this Agreement.

23. GOVERNING LAW AND VENUE

The District and Consultant understand and agree that the laws of the State of California shall govern the rights, obligations, duties, and liabilities of the Parties to this Agreement and also govern the interpretation of this Agreement. The venue for any litigation concerning this Agreement shall be in San Luis Obispo County.

24. ATTORNEY'S FEES AND COSTS

The prevailing party in any action between the Parties to this Agreement brought to enforce the terms of this Agreement or arising out of this Agreement may recover its reasonable costs and attorney's fees expended in connection with such an action from the other Party.

25. ENTIRE AGREEMENT

This Agreement contains the entire understanding between the Parties relating to the obligations of the Parties described in this Agreement. All prior or contemporaneous agreements, understandings, representations, and statements, oral or written, pertaining to the subject of this Agreement or with respect to the terms and conditions of this Agreement are merged into this Agreement and shall be of no further force or effect. Each party is entering into this Agreement based solely upon the representations set forth herein and upon each party's own independent investigation of any and all facts such party deems material.

26. TIME OF THE ESSENCE

District and Consultant agree that time is of the essence in this Agreement and for each and every term herein.

27. WAIVER AND REMEDIES

Any deviation from, or waiver of, any provision of this Agreement, shall not be deemed a continuing deviation or waiver nor a waiver of any other provision of this Agreement. Any actual or alleged failure on the part of the District to inform Consultant of non-compliance with any requirement of this Agreement imposes no additional obligations on the District nor does it waive any rights hereunder. No remedy conferred by and specific provisions of this Agreement is intended to be exclusive of any other remedy and each and every remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. The election of any one or more remedies shall not constitute a waiver of the right to pursue other available remedies.

28. SUCCESSORS AND ASSIGNS

All representations, covenants, and warranties set forth in this Agreement by, on behalf of, or for the benefit of any or all of the Parties hereto shall be binding upon and inure to the benefit of such Party, its successors and assigns.

29. CONTENTS OF REQUEST FOR PROPOSAL AND PROPOSAL

Contractor is bound by the District's Request work and the contents of the proposal submitted by the contractor, Exhibit "D" hereto. The incorporation of the contractor's proposal shall be for the scope of services to be provided only, and any other terms and conditions included in such proposal shall have no force and effect on this Agreement or the relationship between contractor and/or District, unless expressly agreed to in writing.

30. SEVERABILITY

If any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal, or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality, or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal, or unenforceable provision had not been contained herein.

31. SECTION HEADINGS

The headings of the several sections, and any table of contents or exhibits appended hereto, shall be solely for convenience of reference and shall not affect the meaning, construction, or effect hereof.

32. AUTHORITY TO EXECUTE THIS AGREEMENT

The person or persons executing this Agreement on behalf of the Parties warrants and represents that he/she has the authority to execute this Agreement on behalf of the respective Party and has the authority to bind the Party to the performance of its obligations hereunder.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed the day and year first above written.

Consultant: Aqua Metrics

By: _____
(Signature)

(Typed Name)

(Title)

NIPOMO COMMUNITY SERVICES DISTRICT
A California special District

Mario Iglesias, General Manager

APPROVED AS TO FORM:

Craig A. Steele, District Counsel

Attachments:	Exhibit A	Scope of Work
	Exhibit B	Payment Schedule
	Exhibit C	Insurance Requirements
	Exhibit D	Consultant's Proposal

EXHIBIT A

SCOPE OF WORK

1. OBJECTIVE

This Scope of Work ("SOW") is intended to provide a general understanding and document the initial planning efforts by and between Aqua-Metric Sales Company ("Consultant") and Nipomo Community Services District ("District") necessary to facilitate a functional FlexNet Advanced Metering Infrastructure ("AMI") system.

This SOW shall be used to reach a satisfactory level of mutual agreement between Consultant and District with respect to the objectives and requirements of the Project.

The parties hereto acknowledge and agree the SOW may adjust as necessary without formal Change Order to accommodate changes in the project which do not impact the overall Project cost or timeline. Any significant change(s) to the SOW that would otherwise cause a change in the Project cost or timeline shall be executed upon written change order, pursuant to Section 6 of the Professional Services Agreement, duly signed by an authorized representative of each party.

2. General Responsibilities

a. Consultant Responsibilities

- i. Designate a primary point of contact to oversee the project deployment.
- ii. Coordinate kickoff meeting with core project personnel to review the project plan, deliverables, and timeline.
- iii. Develop a project plan and timeline to use as general guidelines for all project deliverables.
- iv. Coordinate deliverables with suppliers and subcontractors to ensure project is executed timely.
- v. Manage product and material acquisition with product supplier(s).
- vi. Manage the installation, setup and configuration of local network infrastructure.
- vii. Assist the District during the deployment and integration of District's billing software ("CIS").

b. District Responsibilities

- i. Appoint a primary point of contact to coordinate with Consultant throughout the overall delivery of the solution described herein.
- ii. Designate any additional District personnel who will be available to participate throughout the project.

- iii. Establish a communication and activity plan with reporting requirements during project deployment.
- iv. Provide a secure and suitable location to install Base station hardware.
- v. Engage with and coordinate with District's utility billing software provider's ("CIS Provider") tasks and responsibilities during all phases of deployment.
- vi. Develop and implement the System Acceptance Testing (SAT) criteria to use as guidelines for formal acceptance of the network infrastructure, Regional Network Interface ("RNI") head end system and Sensus Analytics Software.

3. Network Deployment

a. Network Infrastructure

- i. Consultant will coordinate and conduct a site visit with District at the proposed location prior to installation. Concluding the site survey, Consultant and District will coordinate target dates for Base station installation.
- ii. Consultant will furnish and install one (1) Sensus M400 Base stations ("Base station"), one (1) each Base station antenna (if required), and one (1) each cellular backhaul modems and install.

1. Treatment Plant

- a. Install new OMNI antenna and coaxial
- b. Install base station on footing
- c. Install grounding for tower and equipment
- d. Install new 120V circuit from junction point provided by the District at footing
- e. Sweep Test

2. Water Tank

- a. Install new antenna on railing
- b. Install new coaxial attached to vertical fill pipe
- c. Install base station to tank footing
- d. Ground equipment to tank steel
- e. Install new 120V circuit and ½" rigid conduit (approximately 60 feet along the base of the tank)
- f. Sweep Test

- iii. The District will be required to run electricity to each Base station, as well as provide an electrical base, mounting racks, and/or antenna mounts, as

needed. At minimum, the District will be responsible for providing the following at each Base station site:

1. Unistrut H-Frame on the inside of the tower leg which the ladder is attached;
 2. 120V single phase service with 15-amp breaker;
 3. 3-wire flex conduit pigtail from the breaker to the Base station
 4. RJ-45 Ethernet Connection
 5. Cellular data plan for the backhaul communication device
- iv. Consultant shall install and commission the Base station, antenna, and communications backhaul at the proposed site.
- b. Head End System
- i. Consultant will provide the technical resources and identify the detailed steps of the standard integrations to support the implementation, configuration, and integration of the Regional Network Interface (“RNI”) with FlexNet Base stations, Sensus Analytics Software, and the District’s utility billing software (“CIS”).
 - ii. Sensus will setup and configure the hosted RNI environment within Sensus’ data centers. Consultant and Sensus will configure the RNI for various Sensus systems and acceptance of third-party application integrations. When applicable, Consultant will provide guidance to District on various application configurations when different options are available.
 - iii. The District will contract with the CIS Provider exclusively and provide Consultant with the CIS Provider assigned technical resource who will serve as the primary contact during system integrations. Consultant will provide CIS Provider with the requirements needed to facilitate a nightly sync file, interface to receive read data within the CIS.
- c. System Acceptance Testing (“SAT”)
- i. The District shall draft and provide SAT acceptance criteria. The Consultant and District will coordinate and resolve any issues identified during SAT.
 - ii. The District shall perform SAT to verify all integrations between the AMI System and the CIS have been satisfactorily completed to support “go-live” and full deployment.
 - iii. The District shall complete all testing within thirty (30) days of commencing SAT and provide written completion notice of the SAT to Consultant upon successful completion.

d. Production Go-Live

- i. Consultant will work with the District to determine the Production Go-Live date and timeline. Once proper validation and testing has been performed on the network and software as described above, go-live will commence and Consultant shall work with the District to conclude the network deployment. Consultant and District will coordinate to facilitate and complete all go-live activities. Upon completion of all go-live activities, District shall provide written acceptance of the network deployment.

e. Product Acquisition

- i. Consultant will procure and furnish the product(s) and material(s) detailed in Exhibit D. Consultant assumes all product(s) and material(s) will be delivered and stored within a District provided facility which such address shall be indicated on District's purchase order to Consultant. The District shall grant access to Consultant's authorized personnel as necessary during normal business hours to carry out daily operations throughout deployment of the project.

f. Training

- i. Consultant will train the District's key personnel on use and troubleshooting of the AMI System and Field Assets (defined below). Consultant will provide the District with relevant network, software, and product documentation in a digital format.

g. Deployment of Field Assets

- i. The District will be responsible for installing and activating all PermaLog+ Leak Detection Loggers and Sensus SmartPoint radio transceivers ("Field Assets") in desired locations throughout the District's service area; however, within transmission range of the local area Base station. Consultant's technical resource will provide guidance to determine acceptable locations for Field Assets.

4. Project Close-Out

- a. Consultant and District will prepare punch-list items to complete prior to Project Close-Out.
 - i. Consultant will coordinate with Consultant's technical resources and/or Sensus to address and resolve any action items related to network Base stations, RNI, and Sensus Analytics.
 - ii. Consultant will assist the District in developing a list of action items for the CIS provider as it relates to the AMI System. The District shall be responsible for communicating any punch-list with the CIS Provider and coordinating with Consultant to ensure all items are resolved.

- b. Project Acceptance Documentation
 - i. Consultant will provide a final project reconciliation and provide a final invoice for any outstanding items, including any additions or deductions made by authorized Change Order.
 - ii. Consultant will furnish a Project Acceptance Sign-Off outlining all deliverables which have been furnished and fulfilled under this Agreement.
 - iii. Consultant will provide District with standard unconditional waiver and release documents from Consultant and any supplier or subcontractor.
- c. Transfer Responsibilities
 - i. Upon execution of the Project Acceptance Sign-Off, Consultant will transfer support and troubleshooting relating to the Sensus FlexNet AMI Network, RNI, and Field Assets to Consultant's technical resources as part of Consultant's on-going Annual Support.

5. Assumptions and Clarifications

- a. Additional parts, materials, or labor not previously agreed upon will be quoted at current market values or cost plus fifteen percent (15%) and include all applicable sales taxes and made effective upon duly authorized Change Order.
- b. This Scope of Work is limited to the all parts, materials, and labor necessary to supply and install the planned Sensus FlexNet infrastructure as proposed in Consultant's proposal, attached hereto as Exhibit D and incorporated herein by this reference. Consultant will not be responsible for any expansion of service area, or additional infrastructure requirements to cover areas or additional field modules (including but not limited to water meters, electric meters, gas meters, lighting modules, etc.). Any request for additional modules, further system enhancements, integrations or ongoing management/maintenance of the system, will be priced accordingly at current market values at the time of request, subject to a duly-authorized Change Order approved by the District.
- c. Consultant has provided costs for integrating Sensus FlexNet with the District's CIS; however, the CIS Provider may impose separate fees for extract and meter swap integration with Sensus FlexNet. Consultant is unable to ascertain additional fees as they are facilitated independently and directly between the CIS Provider and the District. The District will be responsible for any additional cost(s) or increased fee(s) imposed by CIS Provider directly.

EXHIBIT B
PAYMENT SCHEDULE

1. Per Proposal (Exhibit D)
2. Net 30 on work accomplished

EXHIBIT C

INSURANCE REQUIREMENTS

Without limiting Consultant's defense and indemnification obligations to District, and prior to commencement of Work, Consultant shall obtain, provide and maintain at its own expense during the term of this Agreement, policies of insurance of the type and amounts described below and in a form satisfactory to District.

General liability insurance. Consultant shall maintain commercial general liability insurance with coverage at least as broad as Insurance Services Office form CG 00 01, in an amount not less than \$1,000,000 per occurrence, \$2,000,000 general aggregate, for bodily injury, personal injury, and property damage. The policy must include contractual liability that has not been amended. Any endorsement restricting standard ISO "insured contract" language will not be accepted.

Automobile liability insurance. Consultant shall maintain automobile insurance at least as broad as Insurance Services Office form CA 00 01 covering bodily injury and property damage for all activities of the Consultant arising out of or in connection with Work to be performed under this Agreement, including coverage for any owned, hired, non-owned or rented vehicles, in an amount not less than \$1,000,000 combined single limit for each accident.

Professional liability (errors & omissions) insurance. Consultant shall maintain professional liability insurance that covers the Services to be performed in connection with this Agreement, in the minimum amount of \$1,000,000 per claim and \$2,000,000 in the aggregate. Any policy inception date, continuity date, or retroactive date must be before the effective date of this Agreement and Consultant agrees to maintain continuous coverage through a period no less than three (3) years after completion of the services required by this Agreement.

Workers' compensation insurance. Consultant shall maintain Workers' Compensation Insurance (Statutory Limits) and Employer's Liability Insurance (with limits of at least \$1,000,000).

Consultant shall submit to District, along with the certificate of insurance, a Waiver of Subrogation endorsement in favor of District, its officers, agents, employees and volunteers.

Other provisions or requirements

Proof of insurance. Consultant shall provide certificates of insurance to District as evidence of the insurance coverage required herein, along with a waiver of subrogation endorsement. Insurance certificates and endorsements must be approved by General

Manager prior to commencement of performance. Current certification of insurance shall be kept on file with District at all times during the term of this contract. District reserves the right to require complete, certified copies of all required insurance policies, at any time.

Duration of coverage. Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the Work hereunder by Consultant, his agents, representatives, employees, or subconsultants.

Primary/noncontributing. Coverage provided by Consultant shall be primary and any insurance or self-insurance procured or maintained by District shall not be required to contribute with it. The limits of insurance required herein may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of District before the District's own insurance or self-insurance shall be called upon to protect it as a named insured.

District's rights of enforcement. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, District has the right but not the duty to obtain the insurance it deems necessary and any premium paid by District will be promptly reimbursed by Consultant or District will withhold amounts sufficient to pay premium from Consultant payments. In the alternative, District may cancel this Agreement.

Acceptable insurers. All insurance policies shall be issued by an insurance company currently authorized by the Insurance Commissioner to transact business of insurance or is on the List of Approved Surplus Line Insurers in the State of California, with an assigned policyholders' Rating of A- (or higher) and Financial Size Category Class VI (or larger) in accordance with the latest edition of Best's Key Rating Guide, unless otherwise approved by the General Manager.

Waiver of subrogation. All insurance coverage maintained or procured pursuant to this Agreement shall be endorsed to waive subrogation against District, its elected or appointed officers, agents, officials, employees, and volunteers. Consultant hereby waives its own right of recovery against District and shall require similar written express waivers and insurance clauses from each of its subconsultants.

Requirements not limiting. Requirements of specific coverage features or limits contained in this Exhibit are not intended as a limitation on coverage, limits or other requirements, or a waiver of any coverage normally provided by any insurance. Specific reference to a given coverage feature is for purposes of clarification only as it pertains to a given issue and is not intended by any party or insured to be all inclusive, or to the exclusion of other coverage, or a waiver of any type. If the Consultant maintains higher limits than the minimums shown above, the District requires and shall be entitled to

coverage for the higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the District.

Notice of cancellation. Consultant agrees to oblige its insurance agent or broker and insurers to provide to District with a thirty (30) day notice of cancellation (except for nonpayment for which a ten (10) day notice is required) or nonrenewal of coverage for each required coverage.

Additional insured status. General liability policies shall provide or be endorsed to provide that District and its officers, officials, employees, and agents, and volunteers shall be additional insureds under such policies. This provision shall also apply to any excess/umbrella liability policies.

Prohibition of undisclosed coverage limitations. None of the coverages required herein will be in compliance with these requirements if they include any limiting endorsement of any kind that has not been first submitted to District and approved in writing.

Separation of insureds. A severability of interests provision must apply for all additional insureds ensuring that Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the insurer's limits of liability. The policy(ies) shall not contain any cross-liability exclusions.

Pass through clause. Consultant agrees to ensure that its subconsultants, subcontractors, and any other party involved with the project who is brought onto or involved in the project by Consultant, provide the same minimum insurance coverage and endorsements required of Consultant. Consultant agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. Consultant agrees that upon request, all agreements with consultants, subcontractors, and others engaged in the project will be submitted to District for review.

Agency's right to revise specifications. The District reserves the right at any time during the term of the contract to change the amounts and types of insurance required by giving the Consultant ninety (90) days advance written notice of such change. If such change results in substantial additional cost to the Consultant, the District and Consultant may renegotiate Consultant's compensation.

Self-insured retentions. Any self-insured retentions must be declared to and approved by District. District reserves the right to require that self-insured retentions be eliminated, lowered, or replaced by a deductible. Self-insurance will not be considered to comply with these specifications unless approved by District.

Timely notice of claims. Consultant shall give District prompt and timely notice of claims made or suits instituted that arise out of or result from Consultant's performance

under this Agreement, and that involve or may involve coverage under any of the required liability policies.

Additional insurance. Consultant shall also procure and maintain, at its own cost and expense, any additional kinds of insurance, which in its own judgment may be necessary for its proper protection and prosecution of the work.

EXHIBIT D
CONSULTANT'S PROPOSAL



Sales Quote

July 28, 2020

Aqua-Metric Sales Company

Kristy Segarra - Manager, Bids and Proposals
16914 Alamo Parkway, Building 2 | Selma, TX 78154
Phone: (210) 967-6300 | Facsimile: (210) 967-6305

Quote for: Nipomo Community Services District
Attention: Mario Iglesias, General Manager
Address: PO Box 326
City, State, ZIP: Nipomo, CA 93444
Phone: (805) 929-1133

Quantity	Description	Unit Price	Line Total
2	M400 Basestation ⁹	\$30,000.00	\$60,000.00
1	M400 Basestation Installation at Water Tank Site ^{9,10}	\$12,750.00	\$12,750.00
1	M400 Basestation Installation at Treatment Plant ^{9,10}	\$10,650.00	\$10,650.00
1	Communication Backhaul ^{9,11}	\$1,000.00	\$1,000.00
1	Juniper Archer3 Handheld	\$4,369.95	\$4,369.95
1	Juniper Archer3 Single Ethernet Dock	\$938.01	\$938.01
1	CommandLink	\$533.55	\$533.55
Setup and Configuration			
1	RNI SaaS Setup		Included
1	RNI Core Education	\$2,000.00	\$2,000.00
1	Sensus Analytics System Setup		Included
1	Sensus Analytics Basic Integration ^{9,12}	\$4,000.00	\$4,000.00
1	Sensus Analytics Training	\$2,500.00	\$2,500.00
1	AMI Network Implementation ⁹	\$5,000.00	\$5,000.00
Recurring Annual Subscriptions^{7,8}			
1	Annual Hosted RNI Software-as-a-Service, Water Only ⁸	\$8,240.00	\$8,240.00
1	Annual Sensus Analytics Enhanced, Water Only ⁸	\$7,950.00	\$7,950.00
1	Annual Acoustic Monitoring Application Fee ^{7,8}	\$3,125.00	\$3,125.00
2	Annual M400 Basestation Extended Warranty ⁷	\$1,769.00	\$3,538.00
1	Annual Aqua-Metric VAR Support ⁷	\$3,400.00	\$3,400.00
Leak Detection Product			
25	PermaLog+ AMR Leak Detection Loggers, Tiered Pricing for 1-25 Loggers	\$1,061.98	\$26,549.50
25	520M Single Port SmartPoint, Wired Units	\$159.29	\$3,982.25

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

Subtotal	\$160,526.26
Shipping & Handling	
Sales Tax	\$11,638.15
Total	\$172,164.41

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 for thirty days.
 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. Sales tax rate estimated at 7.25%.
 7. Annual 3% price increase for support services.
 8. Minimum five year term for SaaS Model with Annual 3% price increase.
 9. Pricing based on 1,000 Water Services.
- Please refer to the enclosed project clarifications page for additional information.

OCTOBER 28, 2020

ITEM E-2

ATTACHMENT D

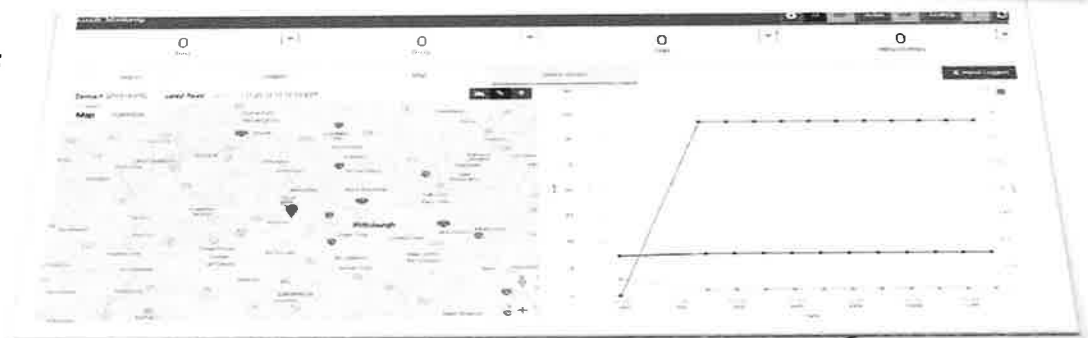
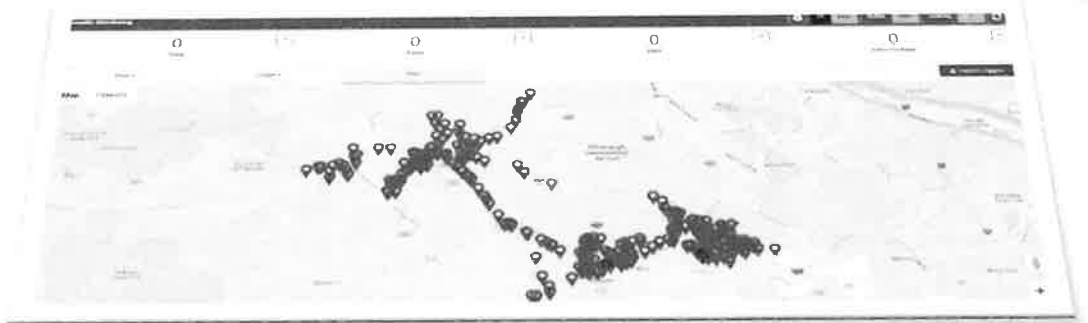
Acoustic Monitoring & Permalog

Acoustic Monitoring Overview

The Sensus Analytics Acoustic Monitoring application combines the proven Permalog® technology with the Sensus FlexNet® communication network to deliver a powerful, remote leak detection solution.

Highlights:

- Sortable and filterable table, graph and map and views
- Historical logger data plotted over time
- GIS driven dashboard for visualization of device location and distribution
- Device color tagged by leak status



Features & Benefits



Prevent

- Major leaks & costly fines or repairs
- Conduct preventative maintenance



Decisions

- Data visualization
- Leak identification



Data

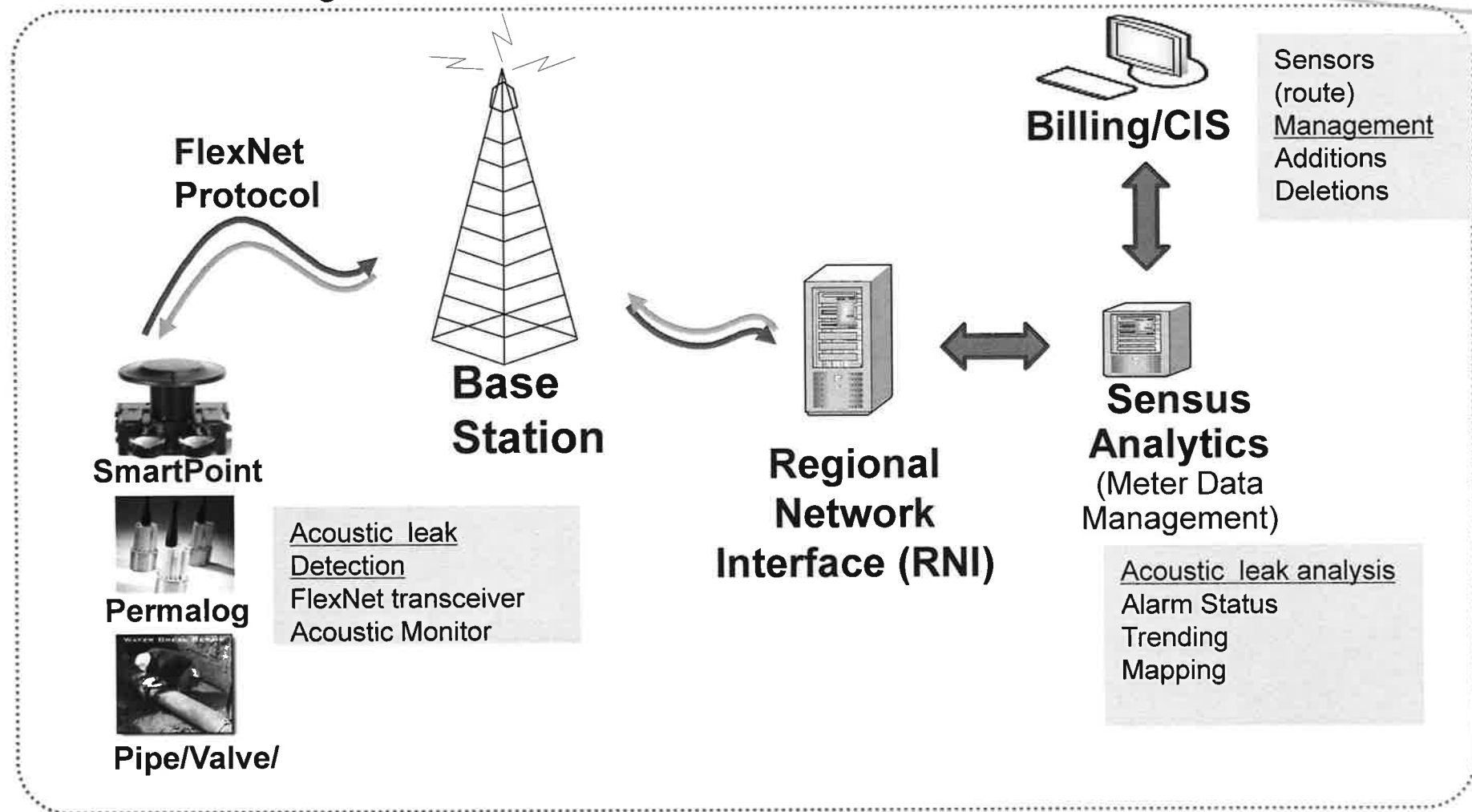
- Leverage FlexNet for data collection
- Near real-time access



Permalog Devices

Leverage FlexNet to reduce costs

Acoustic Monitoring with FlexNet



Typical Installation of Permalog devices

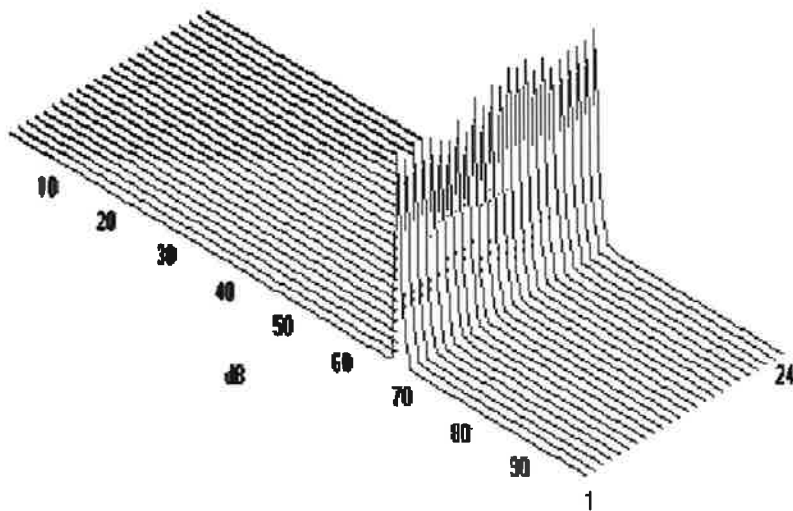
Pipe	Distance	Devices/mile
Plastic	300' - 500'	12-15
Asbestos	500' - 750'	7-10
Metallic	1000'	5



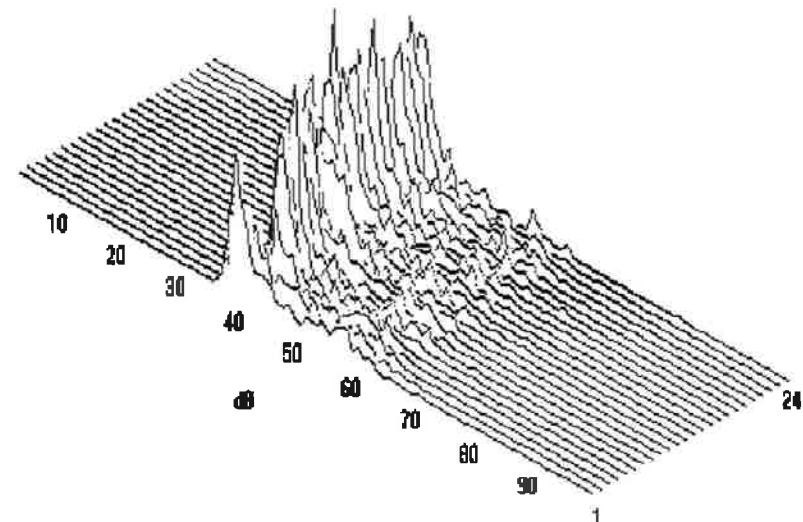
Permalog Noise Logging

Leak Acoustic Signatures

- ~ *Constant volume over time*
- ~ *Constant acoustic over time*

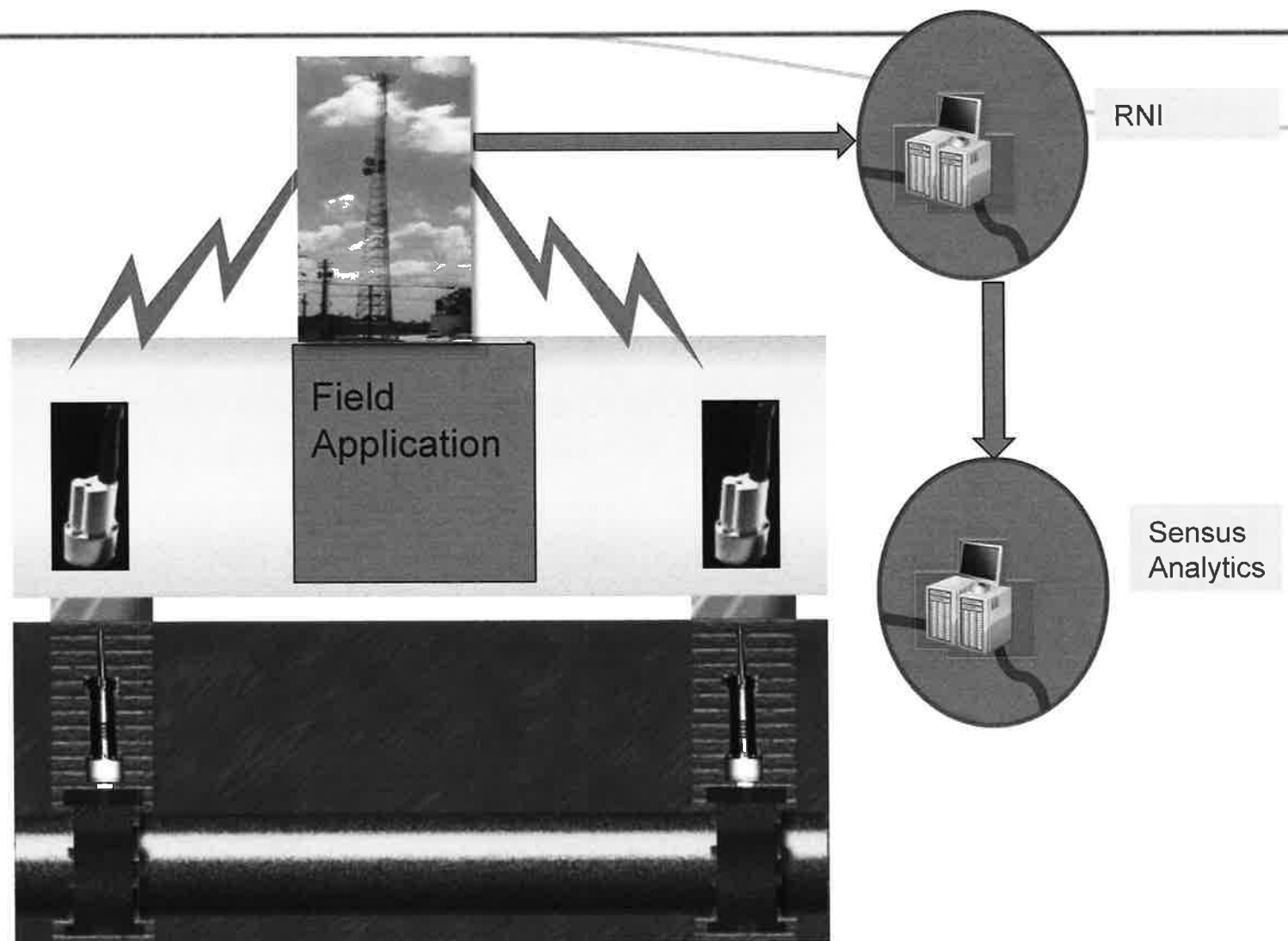


One constant sound over time
✓ This profile indicates a leak



Sounds at different volumes over time
✓ This profile indicates no leak.

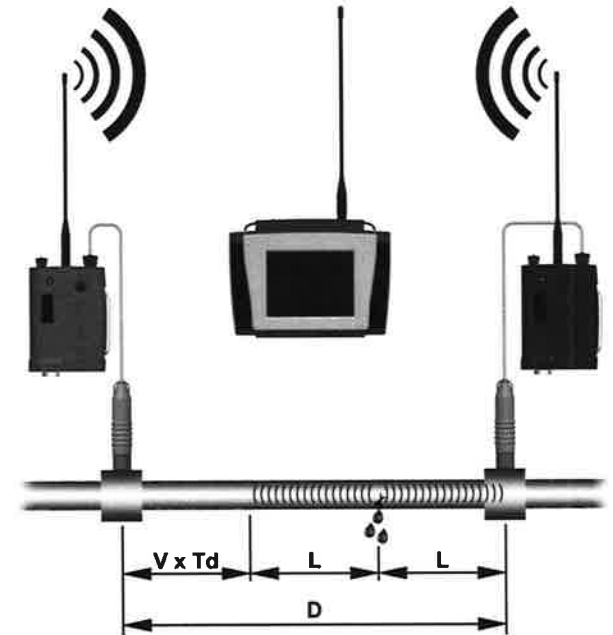
Leak Localization – Noise Logging



Leak Correlator

Leak Correlator

- Once leak is identified thru data
- Leak must be pinpointed in the field
- Correlator will identify specific leak location
 - Avoids costly unnecessary digging
 - Proactively addresses leak



This is not how to find a leak...



Find the Leak before it finds you

Questions



OCTOBER 28, 2020

ITEM E-2

ATTACHMENT E



Determining the Value of Leak Detection

PROPOSED LEAK DETECTION PROGRAM

DISTRIBUTION SIDE LEAK DETECTION SYSTEM



Water Leak Detection

Leak Detection is divided by:

- Distribution Side Leak Detection
- Customer Side Leak Detection





Water Leak Detection

Staff is proposing a system that addresses both, so costs are divided:

- 50% of Cost Allocated to Distribution Side
- 50% of Cost Allocated to Customer Side



Water Leak Detection

Calculate Costs of an Acre-Foot (AF) of Water

Year	Water Budget (A)	AF Prod. (B)	\$/AF (C)
2017	\$ 4,882,789	1,990	
2018	\$ 5,703,500	2,012	
2019	\$ 5,653,000	1,915	
3-Yr AVG	\$ 5,413,096	1,972	\$2,747

Water Budget (A) divided by AF Prod. (B) = \$/AF (C)

[\$5,413,096 / 1,972 AF = \$2,747/AF]



Water Leak Detection

Calculate Costs/Savings based on Annual Water Loss Report

Year	Water Production (A)	NRW % (B)	NRW AF (C) = (A x B)	Distr. Leaks % (D)	Distr. Leaks AF (E) = (C x D)	Revenue Loss (F) =(E x \$2,747)
2017	1,990	12.7%		74%		
2018	2,012	12.7%		74%		
2019	1,915	12.8%		50%		
3-Yr AVG	1,972	12.8%	252	67%	168.49	\$462,796

Italic Values Calculated using 3-Yr AVG Values

NRW = Non-Revenue Water



Water Leak Detection

Estimating Savings Opportunity – Program Objective

	Water Production (A)	% NRW (B)	NRW AF (C)=(A x B)	Distri. Leaks % (D)	Distr. Leaks AF (E)=(C x D)	Revenue Loss (F) ¹	Savings (G) ¹
3-Yr AVG	1,972	12.8%	251	67%	168	\$462,796	
Target Yr. 1	1,972	12.0%	237	65%	154	\$422,164	\$40,632
Target Yr. 2	1,972	10.0%	197	58%	114	\$311,888	\$148,983
Target Yr. 3	1,972	9.0%	178	53%	95	\$259,637	\$203,159

Savings (G) = Revenue Loss (F) minus \$462,796

Note 1: [Target Yr. 1] \$462,796 - \$422,164 = \$40,632, [Target Yr. 2] \$462,796 - \$311,888 = \$148,983, [Target Yr. 3] \$462,796 - \$259,637 = \$203,159



Water Leak Detection

NRW Target	Year	System Cost (A)	Distr. Leak Detect (B)	AMI Leak Detect (C)	Investment (D)	15 Year Cost (E) = (A x B)/15	Leak Repairs (F)	Program Cost (G) = (E + F)	Savings (H)	Net Savings (I) = (H - G)
12.8%	2020									
12.0%	2021	\$ 175,000	50%	50%	Initial Installation	\$ 5,833	\$ 30,000	\$ 35,833	\$ 40,632	\$ 4,798

Calculating Net Savings:

1. System Cost (A) multiplied by Distr. Leak Detect % (B) equals Investment (D)
[\$175,000 x 50% = \$87,500]
2. Investment (D) divided by 15 years equal 15 Year Cost (E)
[\$87,500 / 15 yrs = \$5,833]
3. Program Cost (G) equals 15 Year Cost (E) plus Leak Repairs (F)
[\$5,833 + \$30,000 = \$35,833]
4. Savings (H) minus Program Cost (G) equals Net Savings (I)
[\$40,632 - \$35,833 = \$4,798]

Water Leak Detection – Distribution Side

	NRW Target	Year	System Cost (A)	Distr. Leak Detect (B)	AMI Leak Detect (C)	Investment (D)	15 Year Cost (E) = (A x B)/15	Leak Repairs (F)	Program Cost (G) = (E + F)	Savings (H)	Net Savings (I) = (H – G)
Currently	12.8%	2020									
15 Year Life Cycle	12.0%	2021	\$ 175,000	50%	50%	Initial Installation	\$ 5,833	\$ 30,000	\$ 35,833	\$ 40,632	\$ 4,798
	10.0%	2022	\$ 25,000	100%		Additional Equip	\$ 30,833	\$ 31,350	\$ 62,183	\$ 148,983	\$ 86,800
	9.0%	2023	\$ -				\$ 5,833	\$ 32,291	\$ 38,124	\$ 203,159	\$ 165,035
	9.0%	2024	\$ -				\$ 5,833	\$ 33,259	\$ 39,093	\$ 210,948	\$ 171,855
	9.0%	2025	\$ 30,000	100%		Additional Equip	\$ 35,833	\$ 49,707	\$ 85,540	\$ 218,503	\$ 132,963
	9.0%	2026	\$ -				\$ 5,833	\$ 51,198	\$ 57,032	\$ 225,832	\$ 168,801
	9.0%	2027	\$ -				\$ 5,833	\$ 52,734	\$ 58,567	\$ 232,941	\$ 174,374
	9.0%	2028	\$ -				\$ 5,833	\$ 54,316	\$ 60,150	\$ 239,837	\$ 179,687
	9.0%	2029	\$ -				\$ 5,833	\$ 55,946	\$ 61,779	\$ 246,525	\$ 184,746
	9.0%	2030	\$ 35,000	100%		Additional Equip	\$ 40,833	\$ 73,074	\$ 113,907	\$ 253,014	\$ 139,106
	9.0%	2031	\$ -				\$ 5,833	\$ 75,266	\$ 81,100	\$ 259,307	\$ 178,207
	9.0%	2032	\$ -				\$ 5,833	\$ 77,524	\$ 83,358	\$ 265,412	\$ 182,054
	9.0%	2033	\$ -				\$ 5,833	\$ 79,850	\$ 85,683	\$ 271,333	\$ 185,650
	9.0%	2034	\$ -				\$ 5,833	\$ 82,245	\$ 88,079	\$ 277,077	\$ 188,998
	9.0%	2035	\$ 40,000	100%		Additional Equip	\$ 45,833	\$ 85,163	\$ 130,996	\$ 282,649	\$ 151,653
	9.0%	2036	\$ -				\$ 5,833	\$ 87,718	\$ 93,551	\$ 288,053	\$ 194,502
		Totals	\$ 305,000				\$ 223,333	\$ 951,641	\$ 1,174,975	\$ 3,664,204	\$ 2,489,229

Note 1: 2 Leaks/Yr, Estimate \$15,000 per leak repair with 3% escalator for subsequent Years