

# Base Bid - iPERL Residential Meter Option

## **BID PROPOSAL** **FOR** **Advanced Metering Infrastructure & System Water Meter Replacement** **FOR** **THE CITY OF EULESS, TEXAS**

(THIS PROPOSAL MUST NOT BE REMOVED FROM THE CONTRACT DOCUMENTS)

Date: May 29, 2015

TO: CITY OF EULESS  
Purchasing Agent's Office, Fire Administrative Building  
201 N. Ector Drive  
Euleless, TX 76039

FOR:

Pursuant to the foregoing "Notice to Bidders", the undersigned bidder, having thoroughly examined the Contract Documents, the site of the project and understanding the amount of work to be done and the prevailing conditions, hereby proposes to fully complete all of the work and requirements as provided in the plans and Contract Documents and binds himself/herself upon acceptance of this proposal to execute a contract and furnish such bonds as required and proposes to complete the work within the time stated and for the following prices:

Item No.	Estimated Quantity	Description of Item	Unit of Measurement	Unit Price \$/Unit	Total Amount \$
1	1	Project Management	LS	\$20,000.00	\$20,000.00
2		Data Collectors - Installed	EA	\$6,368.90	\$6,368.90
3		Data Repeater - Installed	EA	N/A	N/A
4	12,585	5/8" x 3/4" Water Meter and Transmitter - Installed	EA	\$231.19	\$2,909,466.89
5	445	1" Water Meter and Transmitter - Installed	EA	\$279.85	\$124,531.15
6	354	1.5" Water Meter and Transmitter- Installed	EA	\$642.85	\$227,567.23
7	658	2" Water Meter and Transmitter - Installed	EA	\$835.58	\$549,808.54
8	24	2" Turbo Water Meter and Transmitter - Installed	EA	\$987.94	\$23,710.45
9	2	2" Compound Water Meter and Transmitter - Installed	EA	\$1,327.27	\$2,654.53
10	10	3" Turbo Water Meter and Transmitter - Installed	EA	\$1,444.20	\$14,441.95

Item No.	Estimated Quantity	Description of Item	Unit of Measurement	Unit Price \$/Unit	Total Amount \$
11	5	3" Compound Water Meter and Transmitter - Installed	EA	\$1,838.54	\$9,192.68
12	5	4" Turbo Water Meter and Transmitter - Installed	EA	\$2,405.27	\$12,026.33
13	3	6" Turbo Water Meter and Transmitter - Installed	EA	\$4,077.49	\$12,232.46
14	1	1.5" Reclaimed Water Meter and Transmitter - Installed	EA	\$655.55	\$655.55
15	11	2" Reclaimed Water Meter and Transmitter - Installed	EA	\$848.28	\$9331.03
16	1	4" Reclaimed Turbo Water Meter and Transmitter – Installed	EA	\$2,417.97	\$2,417.97
17	2	6" Reclaimed Turbo Water Meter and Transmitter - Installed	EA	\$4,090.20	\$8,180.39
18	658	2" Water Meter Retrofit with Transmitter	EA	\$128.48	\$84,539.84
19	24	2" Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$3,083.76
20	2	2" Compound Water Meter Retrofit with Transmitter	EA	\$128.48	\$256.96
21	10	3" Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$2,569.60
22	5	3" Compound Water Meter Retrofit with Transmitter	EA	\$128.48	\$642.40
23	5	4" Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$642.40
24	3	6" Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$384.55
25	1	1.5" Reclaimed Water Meter Retrofit with Transmitter	EA	\$128.48	\$128.48
26	11	2" Reclaimed Water Meter Retrofit with Transmitter	EA	\$128.48	\$1,413.28
27	1	4" Reclaimed Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$128.48
28	2	6" Reclaimed Turbo Water Meter Retrofit with Transmitter	EA	\$128.48	\$256.96
29	50	5/8" x 3/4" Remote Disconnect Water Meter	EA	\$509.36	\$25,468.00
30	500	Water Meter Box Installation (City Provided)	EA	\$55.90	\$27,950.00
31	500	Water Meter Box Adjustment	EA	\$43.75	\$21,875.00
32	500	Meter Stop Replacement	EA	\$49.69	24,845.00

Item No.	Estimated Quantity	Description of Item	Unit of Measurement	Unit Price \$/Unit	Total Amount \$
33	50	1" Water Service Installation (materials provided by City)	EA	\$3,500.00	\$175,000.00
34	10	2" Water Service Installation (materials provided by City)	EA	\$6,000.00	\$60,000.00
35	500	Irrigation Sprinkler Adjustments	LF	\$125.00	\$62,500.00
36	100	Trench Safety Program	LS LF	\$75.00	\$7,500.00
37	1	Server Software	EA	\$6,666.67	\$6,666.67
38	1	Data Management System Software	EA	\$132,955.56	\$132,955.56
39	1	Customer Information System	EA	No Bid	No Bid
40	1	Training	LS	\$7,500.00	\$7,500.00
41	1	Support	LS	\$37,746.67	\$37,746.67

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**GRAND TOTAL AMOUNT BID**

**\$ 4,615,378.27**

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May 29, 2015

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**Quote for** City of Euless  
**Attention** Purchasing Agent's Office  
**Address** 201 N Ector Drive  
**City, State, ZIP** Euless, Texas 76039  
**Phone** (817) 685-1617  
**Fax** (817) 685-1694

Quantity	Description	Unit Price	Extended
1	Cut Hole in Cast Iron Meter Lid	\$10.00	\$10.00
1	Cut Hole in Plastic Meter Lid	\$3.75	\$3.75
1	Replace Meter Tail	\$25.00	\$25.00
1	Replumbs / Direct Connect	\$93.75	\$93.75
1	3/4" Replumbs	\$93.75	\$93.75
1	1" Replumbs	\$106.25	\$106.25
1	1 1/2" Replumbs	\$187.50	\$187.50
1	2" Replumbs	\$218.75	\$218.75
1	Replace Concrete or Cast Iron Meter Box Lids	\$3.75	\$3.75
1	Replace Plastic Meter Box Lids	\$1.25	\$1.25
1	Pull Meter Only	\$35.13	\$35.13
1	Meter Resetter/Riser Installation	\$18.75	\$18.75
1	Additional Pictures - Price Per Picture	\$1.25	\$1.25
1	Residential Meter Special Job Hours	\$93.75	\$93.75
1	Commercial Meter Special Job Hours	\$106.25	\$106.25

This quotation on the product and services named, may be subject to the conditions noted below:

1. Net 30 Days to Pay
2. Freight Allow on orders over \$5,000
3. All quotes are valid for 90 days from date of quotation
4. Return product may be subject to 25% restocking fee
5. Any items quoted above are not included within the main bid proposal
6. Pricing and Quantities of items noted as "1" Quantity subject to change. Utiliuse is unable to estimate replacements and additional work needed without prior inspection of site.

## Leak Detection Proposal

### Option 1 – AMI PermaLog+

Aqua Metric’s first leak detection proposal to the City of Euless is a standard leak detection package consisting of Fluid Conservation Systems (FCS) PermaLog+ AMI Loggers and Sensus MXU 520M wired SmartPoint radio transmitters. Packaged with these items would be FCS’ Patroller II System with PDA and Aqua Metric / Utiliuse’s NovusCenter software. Our solution is based on using FlexNet as the primary communications backbone.

#### NovusCenter

NovusCenter is an Asset Management and Automation Software that serves as a cloud-based integration portal and repository which allows utility personnel to view their entire automated conservation system from most stationary and mobile devices with Internet access. Detailed real time data is delivered to provide an unparalleled view of the distribution system while allowing increased levels of control and management.

Proprietarily developed NovusCenter was designed with a light weight GIS and Work Order Management functionality to track and monitor Assets such as Valves, Hydrants, Meters, etc. Various modules are available to manage Conservation Product, Metrology Equipment, Meter Installations and Readings, Distribution Automation, Infrastructure Automation, Pressure Controls, and Environmental Safety as well as Lighting Apparatus.

#### NovusMobile

NovusMobile is a Wireless Field Application allows direct contact with maintenance staff, providing the ability to send and receive paperless work orders in real time which results in carbon footprint reduction and improved response time to critical issues and needs. NovusMobile is key to increasing operational success as a field data collection solution with the use of smart phones and/or tablets to capture work orders and related information while in the field. The mobile system can support real time updates via cell network if needed or periodic sync with local database storage with tablet and/or phone is connected via WiFi. Data capture can be achieved via voice to text, barcode scanning, or direct data entry.

#### Solution Overview

Aqua Metric’s proposal includes PermaLog+ AMI Loggers that will cover the City’s complete distribution area. An estimated quantity of 2,000 loggers and wired radio transmitters has been provided. Additionally, to the proposal below, Aqua Metric is offering our installation technician to install the first 200 loggers at no charge to the City.

Quantity	Description	Unit Price	Extended
2000	PermaLog+ AMI Loggers	\$372.50	\$745,000.00
2000	MXU 520M Single Port Wired Units	\$105.63	\$211,260.00
1	Patroller II System	\$6,562.50	\$6,562.50
1	Nautiz X7 PDA	\$1,881.25	\$1,881.25
1	2 Day Training for FCS Product, System Deployment Training, and System Evaluation	\$5,450.00	\$5,450.00
1	NovusCenter Software-as-a-Service for Logger Management - Annual Fee	\$97,500.00	\$97,500.00
2	NovusMobile Software Annual Fee - Per Handheld, Per Year	\$1,000.00	\$2,000.00
1	NovusCenter / NovusMobile Implementation Fee	\$4,000.00	\$4,000.00
1	NovusCenter / NovusMobile Education and Training	\$3,500.00	\$3,500.00

2	Samsung Tablet with 5 Year Service Plan	\$4,277.78	\$8,555.56
1800	Installation of PermaLog+ and Wired MXUs	\$15.00	\$27,000.00
		<b>Total:</b>	<b>\$1,112,709.31</b>

Our proposal includes two Samsung Tablets with 5 years of Data. If the City already utilizes tablets, or would prefer to supply their own tablets with WiFi or Data Capabilities, this line item can be removed from our quote.

A) Type of Equipment

PermaLog+ AMI Logger with Sensus 520M SmartPoint, NovusCenter Software, Patroller II System with PDA; all in conjunction with Sensus FlexNet AMI.

B) Method of Leak Detection

Acoustic listening devices

C) Installation method

Our standard schedule for leak detection installations are as followed:

- Work with the City to determine where their highest level of leak detection concerns are
- Plan a deployment schedule by using maps / GIS system to determine valve locations where the leak detection equipment can be installed.
- Aqua Metric and Utiliuse require the City to ensure the top of each selected valve is accessible
- Modifications to the valve lids will need to be made or specialized valve lids will need to be purchased so that each radio transmitter can be mounted through. The modifications and/or specialized lids will be the responsibility of the City. Aqua Metric / Utiliuse can provide these services or equipment at an additional cost, which can be negotiated at a later date.
- The deployment schedule will be implemented as to start installations – roughly fifty PermaLog+ with Radio Transmitters will be installed daily. Radio transmitters will be activated to ensure proper deployment through the Sensus FlexNet System.
- Leak Detection information will be uploaded into NovusCenter, Utiliuse’s Asset Management and Automated Software. Within a week the City will have immediate access to their Leak Detection system and will be able to monitor distribution leaks on a daily basis.
- The Sensus FlexNet system will be used as the communication backbone. No extra infrastructure (antennas, receivers, or repeaters) will be necessary in this option.

D) Number of Detectors Recommended

Aqua Metric is proposing 2,000 PermaLog+ AMI loggers and wired MXUs for complete distribution coverage. However, the City may choose to purchase less loggers and wired MXU and perform what we call a Lift and Shift.

**Lift and Shift**

Aqua Metric can be flexible with the number of loggers and wired MXUs the City chooses to purchase. We are initially proposing 2,000 units as this is our estimated number to cover all of the City’s distribution lines, however, the City may decide to purchase less units and move forward with a Lift and Shift option.

The Lift and Shift option allows the City to purchase less units at one time and move them around the City as needed to detect leaks. For example, the City may decide to purchase 500 units. In this case we would suggest the City deploying 400 units in locations where they would remain permanent, such as places with known high water loss. The remaining 100 units would be used in pinpointing other leaks throughout the City.

Should the City decide to move forward with a Lift and Shift model, Aqua Metric will train City personnel how to install and uninstall each unit; as well as train how to use NovusCenter software to sign the units in and out to make the Lift and Shift option easier to manage. Additionally, the PermaLog+ AMI Loggers have tiered pricing. Depending on the number of loggers the City chooses to purchase, the unit cost per logger may decrease.

E) Mobility of Detectors

FCS PermaLog+ can easily be redeployed to any valve within the City and will be able to communicate via the Sensus FlexNet system.

F) Describe How Detectors Function

The PermaLog+ AMI loggers are commanded to “wake up” at 2am nightly to listen for noises on the water distribution line where it is located. If a leak is indicated, the logger will “wake up” an hour later to confirm the same leak sound is present. If a leak detection is confirmed within the two times of being listened to, the PermaLog+ unit will enter an alarm state and transmit a signal to indicate a leak condition. If no leaks are present, a signal is transmitted to indicate normal background conditions. The daily reads will be communicated via FlexNet and can be read daily from a central computer, the same as a normal water meter read.

The Patroller II System is used to communicate directly with the PermaLog+ AMI Loggers, allowing City to modify their leak detection settings.

G) Frequency of Reads

One read each night

**Conclusion**

Aqua Metric and Utiliuse would like to work with the City to help build a Leak Detection Program using our automated technology. We will help the City determine which area of town is best for loggers with permanent locations and which valves in those areas are best to use. We can also help establish a Lift and Shift schedule, should the City prefer this model, and make recommendations using our expertise of leak detection equipment and conservation.