A top 50 city validates Olea's Meter Health Analytics

A top 50 city has a robust meter testing program on its high value commercial and industrial metering infrastructure. Understanding the value of Olea Edge's continuous monitoring to speed repairs and generate more revenue for the city, they wished to understand how Meter Health Analytics compared to the industry standard AWWA flow testing. Olea Edge Analytics working with the city deployed the Meter Health Analytics solution on 50 large water meters serving a variety of commercial and industrial customers. The implementation of Meter Health Analytics was very simple for the city. Basic meter data was provided by the city to Olea Edge Analytics. A team of highly trained Olea personnel surveyed the meters, deployed sensors & edge computers, and reviewed meter information. An innovative user interface with real-time information, recommendations, and reports was provided to the city.

The city wanted to quickly validate the ability of Meter Health Analytics to identify broken, worn, and miss-sized water meters. Ten water meters identified by the Meter Health Analytics solution as inaccurate were selected for flow testing. The city flow tested the water meters using AWWA recommended testing protocols. Selected meters were then taken apart to validate the cause of failure and to be repaired. A summary of the meters and test results are:

METER	MHA	AWWA TEST RESULT	VALIDATED FAILURE
1	Failed	Failed	Yes
2	Failed	Passed	Intermittent Register
3	Failed	Failed	Yes
4	Failed	Passed	Backflow
5	Failed	Failed	Yes
6	Failed	Failed	Yes
7	Failed	Failed	Yes
8	Failed	Failed	Yes
9	Failed	Failed	Yes
10	Failed	Failed	Yes

Table 1-Summary of Test Results

Eight meters failed the AWWA flow test and two meters passed the flow test. One of the meters that passed the flow test we identified by Meter Health Analytics and validated by the city to have a broken backflow preventor. The second meter was found to have an intermittent register failure confirm by analysis of high definition video taken of the meter register during operation.

Key observations include:

Debris in Meters

Meter's 1, 5,7, and 9 failed the AWWA flow test. The meters were disassembled, and significant amounts of debris was found in the meters. The meters were cleaned and repaired. The meters were retested per AWWA recommended flow testing procedures and passed the tests. The meters were returned to service.

Figure 1-Example of debris found in 4 meters

Failed Back Flow Preventer

Meter #4 is a fire type compound meter serving a church. Analysis of Meter #4 using Olea's Meter Health Analytics solution identified the occurrence of backflow. An AWWA flow test was performed by the city and the meter passed the flow test. The meter backflow preventer was disassembled, and the flapper valve was found to be failed. The back-flow preventer flapper valve was repaired, and the meter returned to service.

Figure 2-The failed back flow valve assembly on the right compared with the new assembly on the left.

Failed Register Assembly

Meter #6 is a fire type compound meter serving multifamily housing. Analysis of Meter #6 using Olea's Meter Health Analytics solution identified defects in low flow and high flow registers. An AWWA flow test was performed by the city and the meter failed the flow test. The low flow register was found to be damaged and was replaced. The high flow register adapter was disassembled, and the gear assembly was found to be operation incorrectly. The gear assembly was cleaned, lubricated, and returned to service. An AWWA flow test was performed post repair and the meter passed.

Figure 3-Failed register adapter

Meter Health Analytics Success Stories

Who we are

Big Ideas are flowing at Olea Edge Analytics. Our team includes the best minds in the business. With extensive knowledge, specialized skills and deep experience, there is no limit to our thinking. As technology leaders in the maker movement, we are continually looking for new ways to add value to our clients, and to our communities. Based in Austin Texas we believe everyone deserves clean, safe, and affordable drinking water. From our disruptive edge computing technology and artificial intelligence to our personal focus with those on the front lines operating and fixing assets in the water industry, we help Water Utilities and Cities to become more connected. Closing the information gaps that will help us all do more with less and build financially and environmentally sustainable communities in the future.

What we do

Olea Edge Analytics' Meter Health Analytics solution is leading the way for Smart Water in Smart Cities. Our sustainable, one-of-a-kind technology generates revenue and manages critical utility assets, enabling operators to best maintain the health of the assets under their care. Our robust, secure, and fully configurable platform, including both edge and cloud, will deliver no matter how challenging the environment. Our homegrown technology provides real-time results and is simple to use. Connecting with people is at the center of our Smart Water approach because we understand value creation with technology only happens if the people using it trust and believe.

Figure 4-An Old Clock Face register still actively used by a large city utility.

How we do it

Olea Edge Analytics uses advanced technology combined with tools and training for people to help cities and utilities find revenue and operate more efficiently. Our EdgeWorks platform enables the simple placement of sensors on critical assets, like large water meters, to quickly understand how the asset is performing and what specific actions need to be taken to optimize performance. We use disruptive edge computing technology to process more data faster and cheaper than alternative approaches. We design our products and solutions for simple implementation minimizing the need for utility resources. We support the people using our technology with easy to use applications, interfaces, and training to make them successful and confident with advanced technology.

Learn More at www.OleaEdge.com
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