

# A MOBILE ECHOSHORE® LEAK DETECTION SYSTEM.

THE RIGHT DIRECTION TO REDUCE  
NON-REVENUE WATER.



**EchoShore**   
MOBILE TRANSMISSION MAIN  
MONITORING

# FLEXIBILITY, SIMPLICITY AND

Reducing leakage from a transmission main network now has a new approach that is accurate, cost-effective and mobile. The flexible approach is based on water company needs in terms of survey location, level of expertise, crew availability and cost of labor.



The *EchoShore<sup>®</sup>-M* system combines the latest generation of acoustic sensors with proven wireless communication networks in a node configuration that can be easily moved to multiple sites in your transmission main network. This innovative thinking is the result of Echologics pioneering success with correlating leaks on a variety of pipe materials and large diameter mains. The *EchoShore<sup>®</sup>-M* system enables utilities to quickly pinpoint leaks and significantly reduce water loss.

The system is designed to be lightweight, rugged and portable, allowing a water company to monitor different sections of the transmission main from just a few hours to several months.

## Leveraging Local and Global Expertise.

Local water company personnel understand their transmission assets best – terrain, working environment and asset operability. The *EchoShore<sup>®</sup>-M* system has been designed to enable local leak detection crews to manage the installation of the monitoring nodes to the transmission main. Crews will quickly learn the operating procedures required for the *EchoShore<sup>®</sup>-M* system through standardized training provided by Echologics. This approach enables utilities to develop internal expertise and to reduce the cost of transmission main leak detection.

Nodes can be configured to automatically send information to a secure server where experienced leak detection engineers can interpret the data. Echologics leak detection engineers have significant field and acoustic signal processing training in urban and rural environments in both developed and developing countries.

FEATURE	ADVANTAGE	BENEFIT
Flexible monitoring duration	Locate more leaks to achieve NRW targets	Water-loss reduction and cost savings for water company
Acoustic sensors stay outside the transmission main	Easy to deploy with minimal preparation of access points	Operates in a wide range of flow conditions, low risk operation
Cloud-based analysis	Access to global experts without the cost of travel	Superior leak detection accuracy at a lower cost
Separation of sensor network deployment from data analysis	Use local field crews to manage technology deployment	Rapid NRW program kick-off and lower program costs



# USER-FRIENDLY OPTIONS.

## HOW THE *EchoShore*<sup>®</sup>-M SYSTEM WORKS

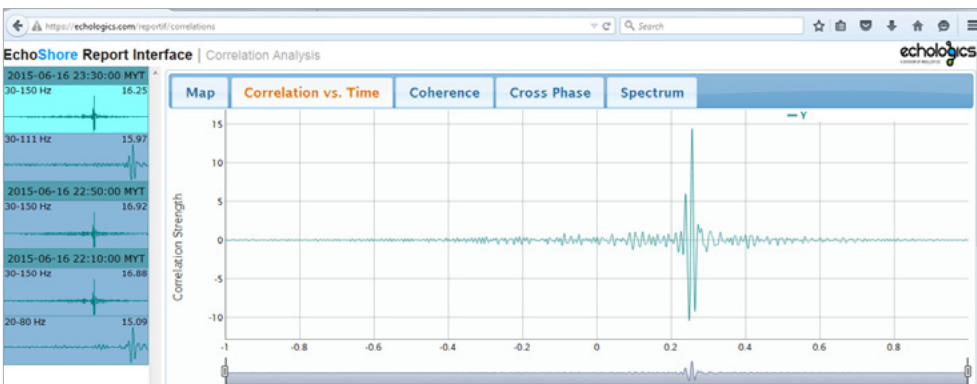
A node is fitted into a rugged case and consists of an advanced acoustic sensor, network hardware, battery, antenna and ancillary parts.



Nodes can be connected to a water main in a chamber, above ground, or other locations where access to the water main can be obtained. Nodes are typically placed 500 to 1,000 meters apart and can be applied to a variety of pipe materials ranging in diameter from 300 to 3,000 mm.



Data files are recorded at a user-specified intervals and wirelessly uploaded to the secure server via a cellular network. Automated analysis of the recorded files is performed to remove unwanted interference and provide indications of leaks or other anomalies in the transmission main.



Once the desired monitoring duration is complete, nodes are ported to a new location.



The *EchoShore*<sup>®</sup>-M platform offers flexible deployment options to best meet current and future water company needs. It makes using advanced leak detection technology affordable, virtually anywhere in the world.

### SERVICE CONTRACT APPROACH

- Echologics field crews conduct inspections
- Echologics leak detection engineers analyze data
- Acoustic data is stored on secured server

### LICENSEE AGREEMENT APPROACH

- Water company enters fixed term license agreement
- Option of fixed monthly fee per minimum distance for technology rental
- Acoustic data is stored on secured server
- Water company has access to information
- Echologics provide standardized training to local staff

### DATA CAPTURE AND ANALYSIS OPTIONS

- Water company can capture data and Echologics conducts analysis
- Water company can capture data and conduct analysis with additional training and support

## FIELD APPLICATIONS

### Non-Revenue Water Program for Transmission Mains

In Malaysia, Jalur Cahaya Sdn. Bhd. has selected the *EchoShore*<sup>®</sup>-M system for a twelve-month field deployment with the objective of significantly reducing non-revenue water loss in their transmission main network without impacting on customer supply. Echologics was able to quickly mobilize the program and achieve rapid success working closely with the water company. Locally based technicians, with no prior leak detection experience, were trained on the *EchoShore*<sup>®</sup>-M system and software program. In the three months of deployment in the field, over 200 kilometers of large transmission mains were surveyed and field crews quickly identified and repaired 20 large leaks.



### ABOUT ECHOLOGICS

Echologics, an affiliate of Mueller Co. LLC, is a developer of water infrastructure diagnostic technologies for water loss management, leak detection, pipe condition assessment and permanent pipeline monitoring. Echologics is dedicated to helping utilities prioritize capital spending, reduce water loss and avoid catastrophic failures.

#### **Mueller Co.**

**Echologics**<sup>®</sup> is an affiliate of **Mueller Co. LLC**, the leader in water distribution products and part of the **Mueller Water Products, Inc.** family, a leading manufacturer and marketer of products and services used in the transmission, distribution and measurement of water. Mueller Water Products' broad product and service portfolio includes engineered valves, fire hydrants, metering products and systems, leak detection and pipe condition assessment. We help municipalities increase operational efficiencies, improve customer service and prioritize capital spending, demonstrating why Mueller Water Products is Where Intelligence Meets Infrastructure<sup>®</sup>.



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