# Water and Sanitation in the News

New Tech Uses Acoustic Waves To Treat Produced Water

A Massachusetts firm says it has discovered an efficient way to treat produced water using acoustics. "The company's design uses acoustic waves to continuously capture and separate substances from water or other liquids without using filters or chemicals," according to statement from the National Science Foundation (NSF), which provided funding for the project.
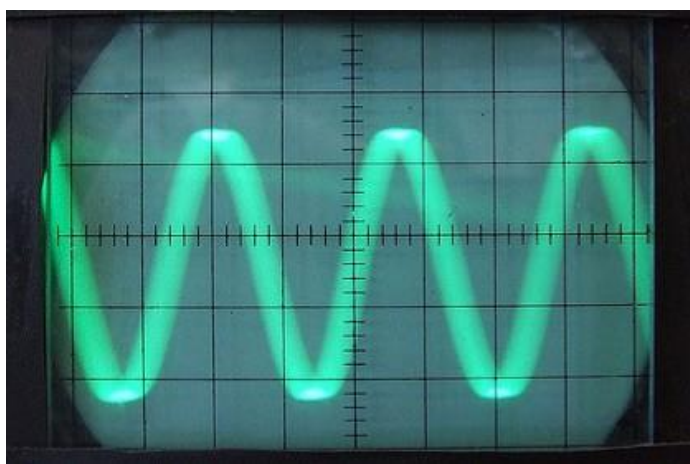
Acoustophoresis is the centerpiece of the company's design. Acoustophoresis is the use of special acoustic wave patterns to manipulate a particle within a liquid. "The wave pattern exerts acoustic forces that bind substances dispersed in the liquid into clusters. Depending on their relative density compared to the liquid, these larger clusters either settle to the bottom or rise to the surface, where they can be separated easily," according to the NSF statement.

Jason Dionne, co-founder and senior engineer for the firm, known as FloDesign Sonics, provided some context. He claimed that compared to traditional methods for treating produced water, this system cuts energy and chemical use by 75 percent. "Acoustophoresis has been used primarily in microfluidics and other micro-scale systems," he said. "When the U.S. Army was looking for a technology for rapid detection of anthrax spores in large bodies of water, we got the idea to develop an acoustic separation technology that works at the macroscale."

FloDesign Sonics demonstrated its technology at the White House Water Summit in March. The effort from the Obama administration drew commitments from the public and private sector to national water sustainability goals. For instance, Xylem pledged to "help drive innovation with an intention to invest at least $300 million in water focused research and development

activities through 2018," according to a document released by the White House.

Sources: Water Online, 28 March 2016

The **Municipal Assistant™** is a software system which serves as a centralised databank and a "digital filing system" with output modules to facilitate the management, administrative and operational functions of a water care works and related activities. The system has been developed for local operating conditions and **can be deployed immediately**. The MA uniquely combines into a single user friendly system with the following core functionalities:

- Water quality monitoring and management

- Evaluating and reporting compliance with regulatory water quality standards and criteria (SANS 241, licensing conditions and Blue Drop and Green Drop specifications)

- Assists the user in the compilation of various reports (including a Blue Drop/Green Drop reporting facility)

- Asset management to ensure optimal performance of facilities to produce good quality drinking water and discharge
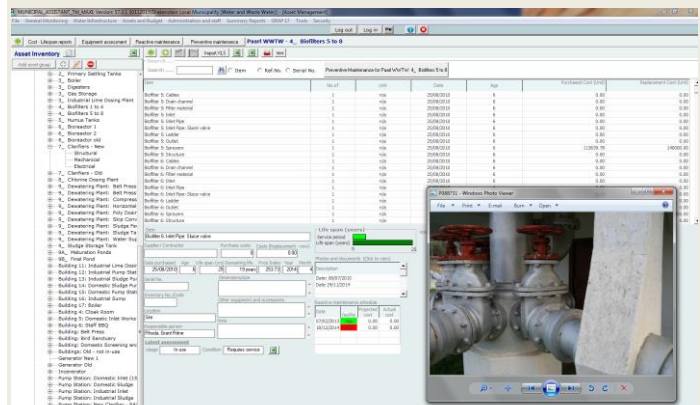
- Operational and maintenance scheduling of equipment and staff utilisation (helps prevent asset failures and water losses)

- Assist with routine and process control inspections and incident reporting

- Compilation of operational and maintenance budgets to ensure timeous preventative maintenance and replacement of equipment

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