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Resonating sound a new treatment finding its way

Derek Parker

MOST water treatment methods use filtration procedures or chemical additives, but one Adelaide-based firm is applying a different level of technology to the problem. It uses a series of computer-generated resonance frequencies to disrupt the polarity of electrons of minerals and compounds in water, which neutralises the bonding ability of any minerals or chemicals present. This, in turn, retards the formation of algae and bacteria, as well as reducing chemical reactivity and corrosion.

"Treating water at the molecular level means that you do not have to remove and dispose of captured material, such as with filter-based systems, and you're not adding anything, such as with bio-chemical treatments," said Paul Pearce, managing director of the company, Hydrosmart . "The size of non-bonded particles in the water is reduced to under four microns, leading to benefits such as control of algae and to an ability to irrigate with saline water without plant damage."

He says another advantage is that treated water requires reduced chemical additives. For example, treated swimming pool water needs much less chlorine, so it can be used for irrigation instead of being dumped into the sewer system.

The unit requires only about three watts of power, which can be provided from a battery or a solar panel. The resonant frequencies are delivered via antennae wound around a pipe through which the water is pumped.

"To date, our main market has been in the agricultural sector," says Pearce "But there are many possible applications in areas, including cooling towers and ballast water in ships. We have also won some important contracts in Asia and the Middle East, and we recently signed an agreement with the Chinese government to examine chemical-free irrigation possibilities there."