

Soquel Creek Water District

Automatic Meter Read (AMR) Technology Information Sheet



Typical AMR meter

Purpose

This information sheet is intended to provide customers knowledge regarding automatic meter read (AMR) technology to help them make informed decisions about whether to request that their meter be manually read.

Most meters in the Soquel Creek Water District system area are automatic meter read (AMR) meters. They record meter flow mechanically and records the cubic feet of water used electronically. To read the meter, customer service field drives by the meters in the street with a radio receiver which picks up the small radio signal (916 MHz) that is put out by the meter every 11 seconds.

Basics

The Soquel Creek Water District (SqCWD) uses the multi-jet bottom load radio-read meter manufactured by Master Meter, Inc. (see link for more information: http://www.mastermeter.com/en/cat_Multi-Jets.html?category=Multi-Jets)

These AMR meters emit a signal at the 916 megahertz (MHz) level in the electromagnetic spectrum, which is in the same transmission range as radio or TV.

The signal is emitted very briefly every 11 seconds and total transmission time equates to 2.63 hours per year. The signal strength at a distance of one foot from the meter pit is at least 12,000 times less than that of a cell phone. The signal strength decays quickly with distance (i.e. 100-fold decrease in strength at 10 feet away). Most meters are located at a at 10 feet distance from a structure. Thus, at a distance of 10 feet from the meter pit the signal strength is at least one million times less than that of a cell phone.

Benefits

Several of the customer benefits related to AMR meters are listed below:

1. Leak Detection – They indicate potential leaks.
2. Data Logging – They log usage which can help identify areas to save water and resolve unexplained usage.
3. Water Theft – They indicate if the meter has been tampered with.
4. Better accuracy – They produce less read errors.
5. Water quality – They indicate if back flowing is occurring, which protects water quality.

Health Findings

Below are the “Key Findings” from the report titled “Health Impacts of Radio Frequency from Smart Meters” by the California Council on Science and Technology (CCST), dated January 2011 (see full report at <http://www.ccst.us/publications/2011/2011smart-final.pdf>).

“KEY REPORT FINDINGS

1. Wireless smart meters, when installed and properly maintained, result in much smaller levels of radio frequency (RF) exposure than many existing common household electronic devices, particularly cell phones and microwave ovens.
2. The current FCC standard provides an adequate factor of safety against *known thermally* induced health impacts of existing common household electronic devices and smart meters.

3. To date, scientific studies have not identified or confirmed negative health effects from *potential non-thermal* impacts of RF emissions such as those produced by existing common household electronic devices and smart meters.
4. Not enough is currently known about potential non-thermal impacts of radio frequency emissions to identify or recommend additional standards for such impacts.”

The CCST is a nonpartisan, impartial, not-for-profit 501(c)(3) corporation established by the CA Assemble to provide expert advice for science and technology-related policy issues – see link for more information

<http://ccst.us/about.php>

Account Security and Privacy

The AMR meters only transmit meter readings and meter identification numbers. They do not have two-way communication, thus they can not be started or stopped from a remote location. Personal customer information is not transmitted.

Manual meter reading option

Some people have requested that their meter be manually read. If you desire to opt-out of automatic meter reading at your property, please fill out [this form](#) and send to Soquel Creek Water District to have the meter(s) radio signal shut off. If the meter is manually read, customer service must open the meter box has to be opened, sometimes dug out and read. To offset increased staff costs to do this one has to pay a \$10 monthly fee per meter to have the meter manually read.

Questions?

Please contact SqCWD’s Conservation and Customer Service Field Manager at shelleyf@soquelcreekwater.org or 831 475-8500 with any questions.