



 **City of Las Cruces**

Red Water Calls Drop, Saving Water

By Suzanne Michaels

When “red” water calls start coming in to Las Cruces Utilities, historically the best way to solve the problem has been to open a fire hydrant near the source of the calls and flush water through the lines, until it runs clear again.

But today, new technologies and techniques are greatly reducing the number of calls coming in – and saving millions of gallons of water that used to go down the street.

Between January and August 2012, Utilities received 432 calls reporting red water. One year later (in 2013) that number dropped to 224 calls. That’s a 48% reduction in red water calls.

“A couple of scenarios can cause water to come out of the tap with rusty or red color.

First, iron and manganese occur naturally in our aquifers,” says Adrienne L. Widmer, P.E., Interim Water Resources Administrator, “Second, we chlorinate our water to assure the community that we do not have coliform bacteria issues in the water distribution system, in accordance with the drinking water standards.

“Our primary duty is to provide safe potable water,” Widmer continues, “But even a tiny amount of chlorine can cause the iron and manganese to drop out of solution in the water, turning it red.”



In September 2012, Utilities tried something new: tweaking the amount of phosphate added to keep the minerals in solution in the water. Red water incidents dipped dramatically. Calls dropped by almost half, greatly reducing the number of hydrant flushes... and saving 3,120,000 gallons of water during the first 8 months of 2013.

Widmer explains there’s another reason for red water: In winter months the city’s overall water usage drops by almost half since no landscaping is typically being watered. That

reduces the number of city wells used on a regular basis. As spring and summer approach, and the demand for water increases, Utilities ramps up all wells to meet the requirements of the community's water consumption increase.

“The change in water demand changes the water velocity through our distribution system,” says Widmer, “which causes the minerals that have settled in pipes to become apparent when water flows out of taps in some parts of the city.”



Another solution Utilities tested: NO-DES technology. NO-DES is a company that developed a process to run water between two fire hydrants at a very high velocity through very fine filters to filter out the minerals that discolor the water.

It's very effective, and very expensive.

Nevertheless, Utilities is still weighing the possibility of leasing or purchasing the NO-DES equipment to extract the minerals that cause red water calls.

You can reach Las Cruces Utilities at 528-3511 from 8 a.m.-5 p.m. Monday-Friday. Las Cruces Utilities provides GAS – WATER – WASTEWATER – SOLID WASTE services to approximately 100,000 Las Cruces residents.

CAPTIONS

Photo 1: Flushing red water out of system, until it runs clear again.

Photo 2: The NO-DES filtration system pumps water at a very high velocity from one fire hydrant to another through very fine filters, filtering out iron and manganese.

Photo 3: A NO-DES filter filled with the minerals that can cause “red” water.