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# THE PUEBLO CHIEFTAIN

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## WATER-FILTRATION DEVICE GETS BOOST FROM THE STATE

By TRACY HARMON

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**FLORENCE** - When Colorado was hit hardest by drought in 2002, Robert Miller designed and built a water recycling system to help save money at his TASROP powder-coating business.

"We went from using 16,500 gallons of water a month to 1,200 gallons a month with the 'Stop the Waste' recycling system. And we now use 1 1/2 barrels of chemicals a year, down from 3 a month," Miller said.

"That is a 90-plus percent savings on water and chemicals," he said.

When he saw what he could do to stop the waste of precious water and reduce the cost of doing business, he decided his invention was too good to keep to himself.

"I didn't have any idea about how to get the word out so I sent out some brochures," Miller said.

One brochure crossed the desk of Mike Anders at the Colorado Department of Transportation. He asked co-worker Theresa Santangelo-Dreiling to follow up on it.

"She took a heck of a chance," Miller said of Santangelo-Dreiling. "She did the first test and oversaw three others."

The tests were conducted at CDOT road maintenance facilities where trucks are cleaned of chemicals, grease and dirt picked up along the highways.

Miller said the dirtiest water from that process was turned into class-2 drinking water (suitable for livestock consumption).

The pit water was contaminated with two dozen pollutants ranging from aluminum to zinc. Most of the contaminants were reduced to a "not detectable" standard, others were reduced drastically.

For example, in one test, lead was reduced from 0.048 parts per million to 0.007. In two of the tests, chloride (salt) went from 12,000 parts per million to half that much.

CDOT signed up for 10 units that are now in use from Denver to Durango. The units are built by Timberline Steel in Pueblo, while an Indiana firm supplies the filters and a South Dakota business supplies the power washers that go with each unit.

A contract for another 10 units is expected this week from CDOT and will help reduce waste at maintenance sites from Sterling to Glenwood Springs. CDOT has a total of 200 maintenance sites in the state, so Miller is hopeful more orders will be coming.

The Colorado Department of Public Health took notice of Miller's work and awarded his business an Environmental Achievement Award in September. The award recognizes him for efforts to reduce water consumption and chemical use in his powder-coating business and to develop and promote the recycling system as a benefit to the environment.

U.S. EPA officials also are impressed with CDOT's efforts to treat and conserve water and in a recent letter urges "all transportation agencies in Region 8 to use Stop the Waste systems."

Of the dozen Stop the Waste recycling systems Miller has sold, one went to Aaladin Powder Coating in Elk Point, S.D., where the business has gone from using 4,000 gallons of water a month to 100 gallons and saves nearly \$700 a month on chemicals.

As the recycling system gets more notice and orders come in, Miller has less and less time to spend at the powder coating shop, relying on his second-in-command to take care of that portion of the business.

Two years ago his business made \$93,000, last year \$333,000 and Miller believes he is on pace to make \$1 million to \$1.5 million this year.

"I really owe special thanks to CDOT for allowing me to accomplish this (growth) through their tests," Miller said.

"Our possibilities with the recycling system are unlimited. They can be used in wineries, canning companies, film companies, dairies, oil wells. They can filter things like arsenic and lead from well water to make the water safe for livestock or domestic use.

"They can filter water in a creek bed after a burn to clean up the water and they can even filter bacteria out of the water," Miller said. "They can do a small job, 38 gallons a minute, to up to 100,000 gallons a day."

"I would love a chance to go to Leadville and put a test unit in and show we can clean it (the Arkansas River) up," Miller said.

Miller is working with Mark Davidson of Gov. Bill Owens' Innovation and Technology office in hopes of securing grants to do clean up work.

"We can change the water world and do it efficiently. Colorado's water effects 27 states.

"If we just clean up Denver, it would make a huge difference in how we effect those other states. If 1,000 businesses in Denver were using the system, it would save 540 million gallons of water a year," Miller said.

Miller has filed for nine patents on the water recycling system and its filters.

"We've been told the first has been approved and we are just waiting for the paper work," Miller said.

Miller's Web site is located at [www.tasrop.com](http://www.tasrop.com).

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