



Published: 02.22.2007

New water system to help contain pollution plume

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ARIZONA DAILY STAR

A water filtration system recently installed on the Northwest Side will help contain a groundwater pollution plume discovered about 20 years ago, officials said last week.

The system will also ensure that residents and businesses in the area have a safe, continuous drinking water supply, state and local leaders said in a dedication ceremony at the filter station, 5781 N. Shannon Road.

The filters, installed for the Metro Water District, use organic compounds from coconut shells to reduce the amount of tetrachloroethene (PCE) and trichloroethene (TCE) in the water and make it safely drinkable.

Both PCE and TCE are solvents used to clean metal. PCE is also used in dry cleaning.

The pollutants, thought to have originated from an oil recycling facility or landfill, may have been in the ground for 50 years.

The groundwater affected by the pollutants extends north of West River Road and runs south across Interstate 10 to West El Camino del Cerro. It's roughly bounded on the east by North Camino de la Tierra and on the west by North Shannon Road.

The district installed the filters in June after previous filtering methods failed to remove enough of the pollutants from the water.

The Arizona Department of Environmental Quality paid about \$1 million for the filters. Maintaining the filters will cost the department \$300,000 to \$400,000 a year.

If the state hadn't stepped in and paid for the filters, the district would have abandoned the well, which accounts for up to 10 percent of the area's water supply, said Mark Stratton, general manager of Metro Water District.

Because removing the contaminated water stops the plume from spreading, abandoning the well could have had severe consequences for residents outside of the polluted area, said Judy Scrivener, the district's chairwoman.

If district residents had to pay for the filters, their rates would've increased dramatically, said Steve Owens, Arizona Department of Environmental Quality director.

State leaders decided long ago that it was important to clean up waste generated by companies that have either moved or gone out of business, Owens said.

The state used money from its Water Quality Assurance Revolving Fund, which was set up to deal with pollutants such as the plume on the Northwest Side.

The filters are projected to remove about 100 pounds of pollutants each year, according to state figures. About 10 tons of granular carbon are placed in each of the facility's two filters.

The water is pushed through the carbon, which combines with the pollutants and removes them from the water.

The carbon — which comes from coconuts — has to be replaced every two months.

The filters allow up to 750 gallons a minute to flow through the system.

Before the filters were installed, the district was removing PCE and TCE through an air-stripping process, where the pollutants are transferred from the water to an air stream.

However, as the level of contamination grew, the air stripping filter couldn't handle the high concentrations of PCE and TCE found in the water, said Michael Block, a district hydrologist.

After the concentrations went beyond federal safety levels, the district temporarily stopped using the well.

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