Pip'stips

Water we gonna do?

In 1994, I played the heroine in the Fiesta Melodrama, which focused on water and development. Florencia Freyda de las Fuentes Frigades (but you can call me Flo) was a young hydrologist searching for water to help save Santa Fe. Let's fast forward 15 years and the subject of water is still a lively topic. It is our most precious resource and we must be wise in its application. Development and sustainability must go hand in hand but we can't forget the river itself. Let's not let another 15 years go by before we act to bring the Santa Fe River back to life and restore a necessary and intrinsic aspect of our community.

Did you know that in 2007, the Santa Fe River was declared the most endangered river in America? Enter our current hero to save the river, David Groenfeldt, executive director of the Santa Fe Watershed Association. I met recently with Mr. Groenfeldt and he laid out his plan to strategically release water from the reservoirs to mimic the natural flow of the river. With constant monitoring, the water released would be close to the amount currently released through reservoir spills that occur during the heavy downpours of our monsoon season.

The worst-case scenarios predict that during a drought the amount of water in our reservoir would simply not meet the demands by the city and must be supplemented by groundwater pumping. The predictions made by the Watershed Association anticipate only an incremental increase from the Buckman wells to meet that end. In years of healthy snow and rainfall, this supplementation would not be necessary.

Santa Fe is the most water-conscious community in the West and through the past 12 years our water consumption has decreased by roughly 30 percent despite the fact that our population has grown by over 10,000. The move toward sustainable building practices and honoring nature is also a progressive and important aspect to our community. However, despite the stringent rules and regulations designed to keep our historic buildings intact and our culture preserved, there is little regard for the rejuvenation of our little river. Had it not been for that river, none of those historic buildings would be there; in fact there would be no community at all.

Mark Saturday, June 6, on your calendars and come out to the DeVargas Park for the 3rd Annual Santa Fe River Festival and Fishing Derby. It is sure to be a fun event for the entire family with children's games, music, and food. And take the time to talk with the folks at the Santa Fe Watershed Association and learn how you can contribute to this important cause. As Santa Fe distinguishes itself with policies that balance today's concerns and development challenges with progressive ideas of green sustainability, the river must not be overlooked. There must be balance in all things and the idea that water is sacred is tantamount to allowing it a place to exist. Let it flow, let it flow, let it flow.

MELISSA PIPPIN-CARSON

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OurwaterQuality

Aquifers and the importance of tests

About 15 percent of all Americans rely on well water as their source of drinking water. Because there are no monitoring requirements for private wells, third-party assessments of water quality are particularly significant.

Earlier this year, the U.S. Geological Survey (USGS) published a report summarizing the major findings of a 1991-2004 study of 2,100 domestic supply wells around the country. Twenty-three percent of the sampled wells had contaminant concentrations greater than EPA and USGS human-health benchmarks. About half of the sampled wells had contaminants over the limit for aesthetic quality. These are the non-enforceable, unregulated secondary-standard contaminants that are not generally considered to be health risks but are annoying; among these are hardness, iron and manganese staining, odor, total dissolved solids, and pH.

The contaminants most often found at concentrations in excess of human-health benchmarks were the inorganic chemicals including major ions, trace elements, radon, uranium, fluoride, and nitrate, all of which originate from weathering of rocks and minerals. Nitrate was found at concentrations greater than the EPA's maximum contamination level in 4.4 percent of the wells sampled. Although nitrate can occur naturally in groundwater, high concentrations result primarily from human activities: fertilizer, livestock, and septic systems.

Microbiological contaminants were detected in as many as one third of the approximately 400 wells sampled for them. Coliform bacteria were present in about 34 percent of the wells and the indicator bacterium *Escherichia coli* (*E. coli*) was detected in about 7.9 percent.

One or more manmade organic compounds (herbicides, insecticides, solvents, disinfection byproducts, gasoline, refrigerants and fumigants) were detected at low levels in over 60 percent of the wells sampled. But in only about 1 percent of the wells did these contaminants exceed human-health benchmarks.

Because aquifer water is a mixture of groundwater from different sources, contaminants generally do not occur in isolation but rather in mixtures, which, even at concentrations less than benchmarks for individual constituents, may present additional human-health concerns. It is important to know everything that is in your water when investigating treatment options, because single-treatment systems may not be able to remove some mixtures of contaminants, and certain combinations of contaminants will interfere with water treatment.

Contaminants from anthropogenic sources, such as nitrates and volatile organic compounds may represent previous land uses and their occurrence demonstrates the importance of knowing the history of the property on which the well is sited. Naturally occurring contaminants — such as arsenic and uranium, which are invisible, have no odor, and are only detected through water testing — may be present at levels of concern for human health in remote or undeveloped settings that might otherwise be perceived as vulnerable to contamination.

STEPHEN WIMAN

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