

Commentary: Water decisions need to be based on both quantity and quality

Marty Mitchell
Tuesday, July 3, 2007

Water watch

This article is one in an occasional series Insight and Opinion is running on water issues affecting New Mexico. The articles are being written mostly by members of the Middle Rio Grande Water Assembly and represent the writers' own views. Other articles in the series are available on the Water Assembly's Web site at waterassembly.org and on The Tribune's Web site at ABQTrib.com.

Today's byline

Mitchell represents the technical interest group for the Rio Grande Water Assembly. She has 40 years of experience in environmental engineering and waste management.

Most water concerns are initially based on quantity.

Development and population increase put increased pressure on water resources. These increased water demands cause the need for increased conservation and the development of new water resources.

However, these new drinking water sources often have decreased water quality that requires treatment prior to use. Treatment includes use of advanced physical methods and chemical treatments that are often equivalent to conventional waste-water treatment. This is costly and may not remove all components that are risks to health.

This suggests that all water planning should consider both quantity and quality.

Periodically, we read news items about problems with water quality or quantity in New Mexico, in which water is trucked in on a temporary basis.

However, in Lumberton, a small unincorporated community near Dulce, the National Guard has trucked in drinking water about twice a week for years from Farmington, about 85 miles away. In Lumberton, water for drinking is carried to classrooms and the cafeteria by students. Non-potable water is distributed through the existing piping system. Nearby Chama has been on boiled or bottled water restrictions several times.

This points out that water supplies are vulnerable to degradation.

As the situation in Lumberton and the recent illnesses around the nation associated with spinach ingestion demonstrate, microorganisms are a continuing risk.

As Albuquerque switches to surface water, many questions need to be answered concerning its water sources - both native river water and water that is introduced from the San Juan-Chama project. The quality and potential risks of the treated water also need to be determined and tracked. We need to know what is in the water, how much is present and what any associated risks may be.

These water problems may result in issues of social and environmental justice, as well health concerns. Safe water should be easily available and affordable by all.

Potential problems associated with water quality include a lack of appropriate laboratory test methods to detect low levels of a variety of contaminants, naturally occurring and man-made, that may enter supplies. The number of chemical compounds and of pharmaceuticals increase constantly.

In an older example, polyvinyl chloride problems were not understood until we had reliable test methods and could identify the sources and how the chemical behaved in the environment and food chain.

Other man-made chemicals and radioactive materials are in the same situation. The man-made chemicals include many organic compounds such as endocrine disrupters and other pharmaceuticals that are relatively hard to destroy in water treatment systems, as well as some new chemicals, for which analyses of the effects are not available. These are not regulated. We don't understand the problems associated with having low levels of these chemicals and radiation sources in water supplies.

To address these issues, we need well-planned research programs into the effects of low levels of exposure to these materials. We need better regulations for water quality that are science-based, both to ensure safe human consumption and to protect the ecosystem.

During the current "Year of Water," we have the opportunity to set priorities and begin to address short-term and long-term problems associated with water quality and use.

Water planning needs to pay adequate attention to quality and quantity. State government needs to better address both.