

The Daily Courier

Saturday, November 06, 2010

Talk of the Town

Column: Wastewater recharge: What are the risks?

By JOHN ZAMBRANO Special to the Courier

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In a Daily Courier Talk of the Town in February, I wrote that our communities need to recharge our wastewater to our aquifer in order to maintain an adequate water supply and help us reach safe yield in the Prescott Active Management Area.

The article noted, however, that there are health risks from contaminants that are not completely removed by our conventional wastewater treatment plants. I recommended monitoring of these contaminants and preliminary investigation of advanced treatment technology for their removal.

The issue of so-called "emerging contaminants" - contaminants for which there are no regulatory standards or monitoring requirements but which pose potential risks - is receiving increasing national attention. The Citizens Water Advocacy Group and the Verde Watershed Association are hosting an all-day forum on this topic, "Recharge of Treated Wastewater to Groundwater: What Are the Risks?" on Saturday, Nov. 13, here in Prescott. The forum is free to the public (see below for details).

The purpose of the forum is to inform the general public and municipal officials about the issue and to have our officials consider whether steps to minimize the risks to our water supply are warranted. In this column, I describe the topics the forum will consider.

When municipalities recharge effluent (treated wastewater) in the Prescott region, they can receive credits to allow more subdivision growth or they can relinquish those credits to help achieve safe yield. We can expect that increasing amounts of wastewater will be recharged to our aquifers as our communities grow. We will begin the forum with a summary of the quantities of treated wastewater currently being recharged to our aquifers by the municipalities in the Prescott and Verde Valley regions.

John Calkins of the Arizona Department of Environmental Quality will describe the types of limitations and regulations that apply when wastewater is recharged to the aquifer. He will also describe what is happening on a national level for the many substances that are not currently regulated.

Dr. David Quanrud of the [University of Arizona](#) will summarize investigations of the levels of these chemicals that he and others have found in wastewater. He also will discuss the removal of these substances in our wastewater treatment plants and in the earth beneath our recharge basins.

Groundwater from our aquifer flows into our streams. Where a groundwater recharge facility is

close to a stream, there is a possibility that wastewater can adversely affect the stream's water quality. Dr. Catherine Propper of [Northern Arizona University](#) will describe her work on the effects of these emerging contaminants on fish and other aquatic life.

Our aquifer is the Prescott region's sole source of drinking water, so we need to ensure that it remains a safe source. Dr. Bruce Blumberg of the University of California at Irvine will discuss his work on the health effects of emerging contaminants and, in particular, those contaminants that disrupt the endocrine system by mimicking human hormones.

Jason Dadikas of the Orange County Water District in California will describe the advanced wastewater treatment his county employs to remove these substances and why the county chose this additional treatment.

The forum will conclude with a discussion by a panel of the speakers in which they and the audience can share opinions about the risks these chemicals pose and what actions can or should be taken.

We may not receive definitive answers to our risk questions from this forum, and we can also assume that individuals will have different perspectives on the amount of risk they are willing to bear. The hope is the forum will help all of us better understand the issue and help our elected officials choose the best options for treatment of the wastewater we are adding to our drinking water source.

The forum audience will include elected officials, environmental professionals and academics, and many interested citizens. Speakers will tailor their presentations toward a lay-audience to allow broad participation.

The forum "Recharge of Treated Wastewater To Groundwater: What Are The Risks?" will take place on Nov. 13 from 9 a.m. to 4 p.m. at the Granite Peak Unitarian Universalist Congregation, 882 Sunset Ave, Prescott (two blocks behind True Value Hardware). Walk-ins are welcomed. Learn more at www.cwagaz.org/forum.html or call 708-1660.

Please submit your questions and comments about our water issues to info@cwagaz.org.

John Zambrano is president of the Citizens Water Advocacy Group and is a retired environmental engineer.

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