

## **Environmental Health and the Issue Of Growth Groundwater Quality**

Written by John Pickle, a mountain area resident and the Director of the Weld County Health Department. He will share his expertise on practical ways we can protect our drinking water.

I am in the unique position of working and spending a significant amount of my time in one area, as Director of the Weld County Health Department, and owning a home and living the remainder of my life in the beautiful mountains of Conifer. While in my job as Director I supervise all of our public health programs, my educational background is in the field of environmental health. I find it interesting to compare the differences between Jefferson and Weld County as they relate to environmental impacts, and approaches to their control.

First let me say that when I speak of environmental health, I am most definitely talking about the link between the environment and human health. In other words for example, my concern with air quality would be more related to the increase in the incidence of asthma, rather than the impacts to trees on Mount Zirkle. While both of these issues are important, contrary to what many would have you believe, there is no such thing as "zero risk".

This is especially relevant as it relates to the growth issue. You just cannot shut off the borders. Coming from the South and listening to my elders talk about the horror stories of Federal Reconstruction after the War of Northern Aggression, I can tell you that our federal government does not see this as a realistic option. There has to be some sort of balance between issues like growth and industry, and environmental quality. I firmly believe that given our level of technology, that this balance is possible, but it does take development of new technology, continual monitoring, planning, evaluation, and changing entire approaches when necessary.

Over the years that we have lived in the Conifer-Evergreen area, we have been amazed at the tremendous growth. It is my sense that the population density has more than doubled over the past 3 to 4 years. While much of this growth comes from other states such as did we, much of it also comes from the Denver Metro area; people moving out of the city to the mountains. For this reason, most of the new growth has no access to public water or sewer. Last year when I worked on a revision in the statutes relating to Individual Sewage Disposal Systems, (septic systems), I testified that as much as 70 % of new housing in Colorado is going in with a private well and a septic system.

With these kinds of numbers, one begins to worry about the quality, (not to mention quantity )of water in certain sensitive areas such as Conifer and Evergreen. My first suggestion is that the public monitor this growth closely. Watch for those zoning change signs, and make sure your voice is heard at the Planning Commission and at the County Commissioner Hearings. But don't just go there to fight growth on the basis of keeping the status quo. Look for ways to utilize scientific data.

For example, our Conifer Mountain Homeowner's Association has a well monitoring program. Volunteers monitor the groundwater level monthly so that when new projects are proposed near our area, we can testify to the environmental impact on our groundwater, based not upon guesswork, but on scientific data.

Another measure you can use is to monitor your own well water by having it bacteriologically tested at least once per year. I have talked to my colleague in Jefferson County, Dr. Mark Johnson, and I know that the Jefferson County Department of Health and the Environment offer this service to county residents at a very reasonable cost. There are also private water quality labs available. Either of these can tell you whether or not the bacteriological quality of your water is satisfactory. I know from talking with some of our neighbors that some wells in our area are showing signs of bacteriological contamination, so you should monitor this closely.

Septic systems in a flat area with sandy, loamy soil, like Weld County, rarely contribute to well water contamination. The septic effluent travels straight down for the most part with little lateral travel. By the time it travels four feet or so, most microbes are filtered out. Even so we in Weld County, because of growth in certain sensitive areas, have looked at increasing the minimum lot size for a septic system and private well, from 1 acre to 2 acres.

On the other hand, in the mountain areas here in Jefferson County, because of the slope and rock formations, virtually untreated effluent can travel very long distances through rock fissures. This substantially increases the potential for contamination of wells even though they may be located a good distance away from the septic system. Again, in talking to Dr. Johnson, Jefferson County Health Department is carefully studying these issues, especially in our mountain areas. Options such as increasing the lot size from a 2-acre minimum to a 4 acre minimum are being looked at, and I feel that this is a very reasonable and appropriate policy for consideration.

In addition, in the past, blasting of rock has been considered an appropriate method to create a structure for installation of septic systems. Although there is always new technology, and this could be looked at as an option for some areas, the idea of having to blast out rock to install a septic system should throw up red flags as to the feasibility of installing a system at all in that sort of sensitive area.

When you really look at it, all of us have a responsibility in this growth issue as it relates to our environment. I do think it takes looking at new technology, reexamining our past policies, and taking some personal responsibility to truly provide for environmentally sound growth. If you have any questions, contact the Environmental Health Division of the Jefferson County, Department of Health and the Environment at (303) 239 7075.

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