

PRESS RELEASE

Cacapon River Watershed Advisory Council

Well Water Testing Project Finds Bacterial Contamination

In the autumn of 1999, the Cacapon River Watershed Advisory Council provided free well water testing for 78 wells in the Cacapon River watershed in Hardy and Hampshire counties. Participants were randomly selected from a list of more than 110 applicants from the community.

Water was tested for bacteria (total coliforms and *E. coli*) and chemistry -- nitrate, nitrite, ammonia, chloride, sulfate, phosphate, silica, alkalinity, pH and conductivity. While chemical measurements varied widely, all were within safe drinking water standards. Nitrate (a form of nitrogen) was of particular concern, as it can be harmful to infants and is closely linked to agriculture. There were no water samples that exceeded the nitrate drinking water standard (10 ppm) and more than 50% did not have detectable levels. This is good news.

The bacterial news was more alarming. Coliform bacteria are common in our environment and include many different strains — some that live in soil and some in animals. Their presence in well water often indicates that surface or near surface water is getting into the well. The safe drinking water standard for coliform bacteria is zero. Unfortunately, sixty percent of the water samples tested had coliform bacteria present.

More specifically, eighteen percent of the water samples tested positive for *E. coli*, a member of the coliform bacteria group that lives in the intestines of warm blooded animals. Their presence in water samples indicates that sewage or animal wastes may be present and that, if waste is present, more harmful disease causing organisms may also be present.

A positive bacteriological result shows that bacteria were present in the water sample delivered to the lab. It may mean that the source well was contaminated, but may also mean that a source of contamination existed in the house or that the sample was accidentally contaminated when collected. We recommended that all wells testing positive for total coliform or *E. coli* bacteria be retested. Prior to retesting, we recommended that the homeowner disinfect their well and drinking water system using local Health Department recommendations and check to see if their well was constructed in compliance with Health Dept. standards. It is particularly important to determine if the well is properly sealed to prevent surface water contamination.

Sample analysis is only valid for a particular water supply at the time and place sampled. Both the chemistry and microbiological condition of the water can change dramatically through time and under different weather conditions. The rainy period that coincided with the well testing program probably contributed to the high percentage of wells with bacterial contamination.

This project was supported by a grant from the Canaan Valley Institute (Davis, WV)
The Cacapon River Watershed Advisory Council is a coalition of citizens concerned with the quality of life in the Lost/North/Cacapon River watershed.