

Water Quality Control Commission
SAFE DRINKING WATER
Issue Summary
March 11, 2009

Safe drinking water is critical for human health. In the 2006 legislative session, policy and rulemaking oversight was transferred from the Colorado Board of Health to the Water Quality Control Commission. Colorado's Safe Drinking Water Program, which is implemented by the Water Quality Control Division (Division), has primacy to implement and enforce the federal Safe Drinking Water Act in Colorado. To maintain primacy, the Water Quality Control Commission must adopt regulations at least as stringent as the federal regulations and the Division must demonstrate that these regulations are being adequately implemented. Maintaining primacy is necessary for the state to be eligible to receive the federal drinking water state revolving fund capitalization grant that is used by the Colorado Water Resources and Power Development Authority to provide loan funding (including low-interest loans to disadvantaged communities) to help meet drinking water infrastructure needs.

New Drinking Water Regulations

Over the last two years, to comply with new federal requirements, the Commission has adopted new drinking water regulations that will be implemented over the next years to protect public health and maintain primacy.

- Long-Term 2 Enhanced Surface Water Treatment Rule. This rule requires source water sampling for systems that use surface water (water from rivers and streams) as their raw water source. The source water is sampled for cryptosporidium, which caused a city-wide waterborne disease outbreak in Milwaukee, Wisconsin in 1993. If source waters contain cryptosporidium, then additional treatment may be required.
- Stage 2 Disinfectants and Disinfection Byproducts Rule. This rule establishes maximum allowable levels for chlorine and carcinogenic chemical byproducts of chlorination in drinking water.
- Groundwater Rule. This rule increases the inspection frequency for systems that use groundwater (water from wells) to every three years, and requires that systems take specific steps to ensure that their well water is either free from fecal contamination or is adequately disinfected.

These new rules represent significant new requirements for all public drinking water systems in Colorado. However, each of these rules has a risk-based component to it, and water systems that are proactive in their approach to complying with these new rules may be able to do so without substantial additional capital cost. The Division is providing training and assistance to public drinking water systems throughout the state to help them comply. Recently, the Division was able to reduce sampling requirements for systems that represent a low risk for disinfection byproducts, saving those systems about \$300,000 in 2009.

Waterborne Disease Outbreaks

After several years with no confirmed waterborne disease outbreaks, the state has experienced one outbreak in each of the last two calendar years. A norovirus outbreak sickened 76 people at a lodge in Conejos County during the summer of 2007. This outbreak was probably caused by inadequately disinfected well water that was contaminated by a malfunctioning septic system. Then, in March 2008 one of the worst disease outbreaks in the U.S. in this decade occurred in Alamosa. The cause of the salmonella outbreak in Alamosa that sickened 435 people was drinking water, although the specific cause is still under investigation. The Division expects to issue a final report on the cause of this outbreak in the spring of 2009. Alamosa was one of about 100 water systems in Colorado operating under a waiver from disinfection requirements. Later in 2009, efforts will likely begin to update and modify selected regulations to help prevent another similar outbreak. Specifically, the Division will propose revisions to regulations that apply to public drinking water systems with disinfection waivers and regulations that apply to all systems regarding controlling cross connections to non-potable water within the piping of water systems.

Uranium and Radium in Drinking Water

Radionuclides, including uranium and radium, occur naturally in groundwater. Unfortunately, Colorado has over 40 (mainly small) drinking water systems that are currently, or expected to be, in violation of the radium and/or uranium Maximum Contaminant Levels established by EPA to assure that drinking water is safe. This presents a serious long-term health threat for nearly 40,000 consumers. Radium is a cancer-causing contaminant, while uranium can cause kidney failure. Treating drinking water to remove radionuclides is complex and expensive because of the concentrated radioactive residues that must be disposed. In 2007, the Division launched the Colorado Radionuclide Abatement and Disposal Strategy (CO-RADS) project to help systems comply. Each drinking water system that volunteered to participate received a comprehensive water quality analysis and technical review of its system to determine costs associated with centralized drinking water treatment. Reports summarizing these efforts are being provided to the systems in March 2009. The costs are expected to be substantial, and the Division will then begin to work with these systems to help with funding options and to evaluate other options including "point-of-use" (under-the-sink) treatment devices. It will likely take a few more years before many of these systems are actually able to provide safe drinking water to their customers.