

Impending EPA Ground Water Rule implementation

The Environmental Protection Agency (EPA) published the proposed Ground Water Rule on May 10, 2000. At that time many anticipated that the rule would become final in November 2000 and the scheduled compliance would be in November 2003. Since then, delays have occurred. KDHE has kept in touch with this matter because it could significantly affect water supplies in Kansas.

Most cities and rural water districts in Kansas use groundwater as a water supply source. KDHE has previously determined that some of these groundwater systems have wells that are under the direct influence of surface water; that is, the wells are shallow and are near rivers or lakes and have the possibility of receiving contamination from the surface water. Since 1993 the GWUDI (groundwater under the direct influence) systems have had to meet the same chlorination and filtration requirements that also apply to surface water treatment plants. The proposed Ground Water Rule applies to all groundwater systems not previously regulated as GWUDI systems.

The EPA issued a statement on March 30 (see sidebar) stating that they intend to make the proposed Ground Water Rule a federal regulation this year. The final requirements may be significantly different than the proposed rule. EPA is considering adding monitoring for coliphage as an additional indicator of fecal contamination. The proposed rule required monitoring for fecal coliform or *E. coli*.

The proposed rule required sanitary surveys by the State “to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water”. The rule also

contamination. Sampling of the raw well water for indicators of fecal contamination will also be required in certain situations.

If the rule as proposed were to become law, capital improvements

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requires the State to conduct a “hydrogeologic sensitivity assessment” of the groundwater systems. The purpose of the survey and assessment is to determine those systems that are susceptible to microbial

may be required of those systems that have a well(s) that is from a “hydro-geologically sensitive source” as determined by the State’s assessment and are not providing “4-log inactivation or removal of viruses”.



Fecal coliform bacteria are a group of bacteria that occur in large numbers in the gut and feces of humans and other mammals. They enter streams and lakes with sewage or wastes. Most fecal coliforms are normal inhabitants of the digestive tract and considered relatively harmless. In fact, their absence can lead to some types of vitamin deficiencies in humans. However, their detection in water may indicate the presence of more harmful microorganisms found in feces. E. coli is the major species of the fecal coliform group.

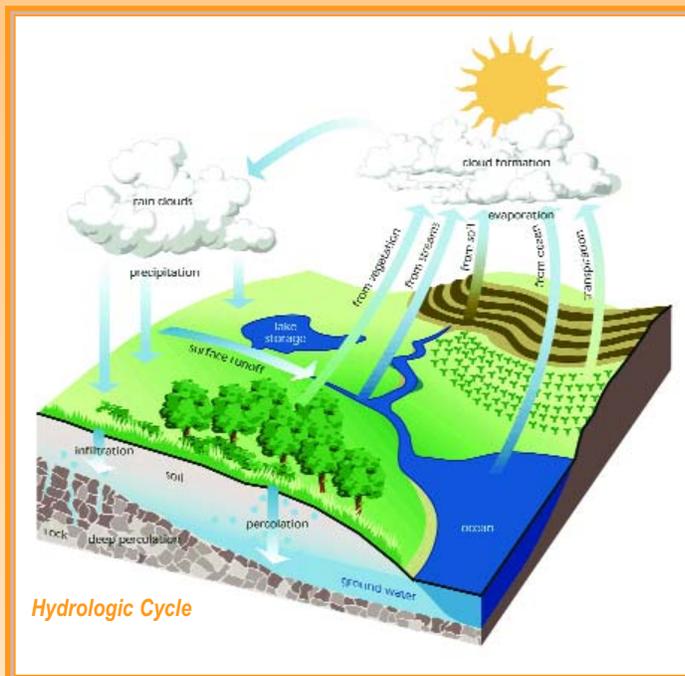
4-log inactivation or removal of viruses is achieved by chemical disinfection (mostly chlorination in Kansas), or UV disinfection, or membrane filtration. For those systems using chlorination this usually means, for example, a 1.0 mg/l or 2.0 mg/l free chlorine dosage/residual for 5 minutes or 2.5 minutes, respectively. If the system is a

groundwater source that has natural ammonia in the water, this will probably mean break-point chlorination to a free chlorine residual or UV disinfection. If a system is already providing the equivalent of 4-log virus inactivation, the impact of the Ground Water Rule will primarily be in monitoring to demonstrate adequate treatment along with monthly reporting to KDHE.

As proposed in the rule, KDHE will, hopefully, have considerable discretion in determining which aquifers are “hydrogeologic sensitivity” which will determine where significant capital improvements may be required. However, additional sampling, recordkeeping, and reporting are contained in the proposed rule. It is hoped that the final requirements are not more burdensome, unnecessary work for cities and rural water districts.

As we all know, groundwater has provided Kansans with a safe, reliable source of drinking water. In those few situations where groundwater contamination has occurred, the water suppliers and KDHE have addressed the matter and corrected the situation so that the drinking water is not affected.

Current Status of EPA Ground Water Rule



EPA statement on status of Ground Water Rule, March 30, 2005

Reducing the risk of exposure to fecal contamination that may be present in water provided by public water systems is important in ensuring that consumers receive safe drinking water. In 2000, EPA proposed the Ground Water Rule (GWR) to substantially improve public health protection by targeting public water systems that are vulnerable to fecal contamination and requiring them to take corrective action to reduce risks. The rule would apply to approximately 147,000 public water systems that serve over 114 million people.

EPA submitted the final rule to the Office of Management and Budget (OMB) on December 29, 2004 for a 90-day review pursuant to Executive Order 12866. OMB began meeting with the Agency to discuss the rule in February 2005. Because a number of issues concerning the underlying regulatory analysis could not be fully addressed within the 90-day review time (which expired on March 29, 2005), EPA asked that the rule be withdrawn from EO 12866 review to allow the Agency time for further consideration of the rule. The Agency will continue to work expeditiously to address remaining issues, with a goal of promulgating the final rule as soon as possible, but no later than the end of 2005. EPA remains committed to ensuring that customers of public water systems using ground water receive safe drinking water.