

## **Executive Summary Groundwater Rule**

### **Summary of Proposal:**

The Groundwater Rule (GWR) is a new National Primary Drinking Water Regulation promulgated by the Environmental Protection Agency (EPA). The GWR was published in the Federal Register on November 8, 2006.

The GWR establishes a risk-targeted approach to identify ground water systems that are susceptible to fecal contamination. Indications of risk may come from total coliform monitoring, hydrogeologic sensitivity analyses, or other system-specific data and information. The GWR specifically targets viral pathogens as a category of fecal contaminants. For systems identified as at-risk to fecal contamination, various corrective action options exist. If treatment is required, at least 4-log inactivation or removal of viruses must be achieved. Systems that either have no treatment or do not meet at least 4-log treatment and draw groundwater from sensitive aquifers, including karst settings, may opt to conduct special source water assessment monitoring to assess source water quality.

According to the Center for Disease Control and Prevention, between 1991 and 2000, 68 waterborne disease outbreaks occurred at public groundwater systems. Although fecal bacterial pathogens were the cause of the majority of outbreaks, the EPA suspects that other outbreaks were caused by viruses given that it is generally more difficult to analyze for viral pathogens than bacterial pathogens. A 2002 study conducted by the USGS for DEP confirmed that bacterial organisms and viral indicator organisms are largely ubiquitous in Pennsylvania, but are more predominant in carbonate bedrock aquifers.

The GWR is an outgrowth of the 1986 amendments to the Safe Drinking Water Act (SDWA) when the EPA promulgated a National Primary Drinking Water Regulation. In 1987, EPA began developing a rule to cover groundwater systems. Following technical discussions among government, academic, and trade associations, the SDWA was amended in 1996 that included regulations specifying the use of disinfectants for groundwater systems “as necessary”.

During the mid to late 1990’s, the EPA held stakeholder meetings that involved State drinking water program representatives. Concurrently, the results of national waterborne disease surveys by ASDWA and AWWARF were evaluated to develop appropriate criteria and objectives for implementing the GWR and instituting regulatory components. On May 10, 2000 the EPA published the Proposed Rules for the National Drinking Water Regulations: Ground Water Rule. Comments by stakeholders resulted in revisions to the Proposed Rule; the final Rule was published in the Federal Register on November 8, 2006.

Minor clarifications are being made to the variance and exemption requirements in Subchapter I of Chapter 109 to be consistent with the federal rule and as a condition of primacy.

### **Purpose of the Proposal:**

The GWR provides for increased protection against fecal contaminants at public water systems served by groundwater sources. Currently, there is no Federal regulation that requires either monitoring of groundwater sources or corrective action upon finding fecal contamination in the

source. Subsequently, EPA established a risk-targeted strategy to identify the subset of groundwater sources that are at higher risk of fecal contamination and require corrective actions. Once an at-risk system is identified, various corrective action options may be employed to eliminate the risk.

The following State GWR regulations are more stringent than Federal regulations:

- At least 4-log treatment at all CWSs is required.
- CWSs will be required to maintain at least 0.4 mg/l chlorine residual or other department approved residual.
- Under Federal TCR regulations, triggered monitoring for a positive coliform in the distribution system can be waived if the problem lies within the distribution system; the GWR does not afford this option and requires a groundwater source sample for E-coli.
- Pennsylvania does not allow discontinuation of 4-log treatment if put into place because of a corrective action.
- The Federal Rule allows source water sampling at a location after treatment if approved by the state, however PA only allows source water sampling prior to treatment that applies to assessment source water sampling and triggered monitoring.

**Affected Regulated Community:**

The GWR affects all public water supplies served by groundwater sources including community water systems and noncommunity water systems (nontransient noncommunity water systems and transient noncommunity water systems) except that it does not apply to public water systems that combine all of their groundwater with surface water prior to treatment under the Surface Water Treatment Rule. The Rule also applies to systems that receive finished groundwater from another public water supply.

**Advisory Committee Review:**

The draft proposed amendments to Chapter 109 were submitted to the Technical Assistance Center Advisory Board (TAC) for review and discussion on December 13, 2007.

**Adoption Deadline:**

DEP projects the adoption and effective date of the state regulations to implement the GWR to be no later than January 4, 2010.

**Recommendations for Public Comment Period and Public Meetings/Hearings:**

The Department recommends a 30-day public comment period. Public meetings or hearings should not be necessary.