

Proposed Rulemaking – Groundwater Rule Chapter 109

Environmental Quality Board
August 19, 2008

Subchapter: Additional Requirements for Groundwater Sources

- Based on the Federal Groundwater Rule (GWR)
 - Promulgated November 8, 2006
 - Effective December 1, 2009
 - Applies to all PWSs with groundwater sources
 - 1700 Community Water Systems (CWSs)
 - 7400 Noncommunity Water Systems (NCWSs)

Variance & Exemptions (V&E)

Minor Clarifications

- EPA promulgated revisions to the V&E Rule on August 14, 1998.
- Minor clarifications of existing requirements in Subchapter I
- Consistent with federal rule – condition of primacy.
- Ensure PWSs consider all options.
- No cost concerns

Purpose of Groundwater Rule

- Provide for increased protection against microbial pathogens – especially viruses
- Identify groundwater sources that have fecal contamination
- Establish treatment techniques and special monitoring for at-risk or contaminated groundwater sources

Federal GWR Requirements

- Sanitary Surveys
- Assessment Source Water Monitoring
- Triggered Source Water Monitoring
- Corrective Actions
- Compliance Monitoring

Sanitary Surveys

- 8 elements:
 - source
 - treatment
 - distribution system
 - finished water storage
 - pumps, pump facilities, and controls
 - monitoring, reporting, and data verification
 - System management and operation
 - Operator compliance with Department requirements

Assessment Source Water Monitoring

- The Department determines whether an aquifer or source is potentially at risk to fecal contamination
- Noncommunity systems using an at-risk source will be required to collect 12 source water samples and analyze for the presence of E. coli

Triggered Source Water Monitoring

- Systems must conduct triggered source water monitoring if they:
 - Are notified of a total coliform-positive sample in distribution system, and
 - Are not conducting compliance monitoring in compliance with the Groundwater Rule
- One sample from each source must be collected and analyzed for the presence of E. coli

Corrective Action

- Corrective Action Options:
 - Correct all significant deficiencies
 - Provide alternate source of water
 - Eliminate the source of contamination
 - Provide 4-log treatment* of viruses

* 99.99% inactivation and/or removal of viruses

Compliance Monitoring

- Applies to all systems that demonstrate to the Department that they can provide or will provide 4-log treatment of viruses
- Systems must monitor the disinfectant residual at entry points served by groundwater to ensure that they are maintaining the required disinfectant residual
- Systems using an alternative technology shall monitor the process in accordance with Department guidelines

PA Specific GWR Requirements

- For Community Water Systems using groundwater sources, Pa. GWR will
 - Establish a minimum entry point disinfectant residual
 - Require community water systems to demonstrate to the Department and provide at least 4-log treatment (99.99% inactivation) of viruses at each entry point per a schedule.

Compliance Schedule

- December 1, 2009
 - Compliance Monitoring
 - Triggered Source Water Monitoring Requirements
 - 0.4mg/L Free Chlorine Residual at CWS
- The Department Must Complete Initial Sanitary Survey at:
 - All CWS by December 31, 2012
 - All NCWS by December 31, 2014

Compliance Schedule

Phase-IN of 4-Log For CWSs

CWS Population Category	Demonstrate how \geq 4-log Will Be Provided by:	Provide \geq 4-log Treatment by:
> 500 People	October 1, 2010	January 1, 2011
100 -500 People	October 1, 2011	January 1, 2012
< 100 People	October 1, 2012	January 1, 2013

Compliance Strategy

- Workgroup concept of Regulatory Development
- Training
 - DEP provided
 - Ongoing through industry associations
- Technical Assistance
- Monitoring calendars
- Update/create new guidance documents
 - 4-log calculation sheet
- Streamlined permit process for NCWSs

Compliance Costs

- Estimated compliance costs to Pa. Regulated Community is \$2.9 million
- Costs include:
 - Non-treatment costs of rule implementation
 - Additional monitoring
 - Reporting and record keeping
 - Installation of 4-log treatment

Public Outreach

- The proposed GWR amendments to Chapter 109 were submitted for comments to the Technical Assistance Center (TAC) for small water systems on December 13, 2007.
- The TAC Board approved the proposed GWR in a letter dated January 2008.
- The proposal was presented to DEP Regional Managers, Technical Chiefs and Supervisors.

Next Steps

- Requesting EPA to notify systems of requirements until Pa. amendments take effect.
- DEP staff will continue to answer questions and assist PWS
- DEP provide presentations at conferences, etc.