



New Regulation Notice: GROUND WATER RULE

Who does the rule affect and when?

Beginning December 1, 2009, all Massachusetts public water systems (PWS) using ground water (wells), including systems receiving their water from other systems using ground water (i.e. consecutive systems) must comply with the new federal Ground Water Rule (GWR). This rule is intended to increase protection against potential viral contamination in PWSs that use ground water sources. It does not apply to systems with ground water under the direct influence of surface water or systems that combine all of their ground water with surface water prior to treatment.

What is the key requirement of the GWR?

All PWSs that do not provide MassDEP approved 99.99% (4-log) treatment of viruses must conduct “triggered monitoring” of their source water for a fecal indicator each time the PWS is notified of a total coliform-positive sample collected under Total Coliform Rule bacteria monitoring. A sample must be collected:

- within 24 hours of being notified of the coliform positive,
- prior to any treatment or chemical addition, and
- at all ground water sources active at the time positive TCR sample was collected, unless the PWS submits (by September 1, 2009) and receives approval of a representative monitoring plan by December 1, 2009. Additional information will be provided at PWS training and at <http://www.mass.gov/dep/water/drinking/systems.htm#gwr>.

If the source sample is fecal indicator positive, a Tier 1 public notification (acute health concern) must be issued and an additional five source water samples collected within 24 hours. MassDEP may require a PWS to take immediate corrective action after the initial source sample is identified as fecal indicator positive.

If any of the additional five source water samples are fecal indicator positive, the PWS will be required to provide emergency disinfection or an alternate source of water until one or more of the following corrective actions is completed:

- the source of contamination is identified and eliminated,
- a deficiency in the water system operation or construction that could lead to fecal contamination has been corrected,
- an alternate source of water is provided, or
- 4-log treatment for viruses using inactivation (disinfection) and or removal (filtration) is installed and demonstrated

PWSs that demonstrate 4-log treatment of viruses through GWR “compliance monitoring” are not required to conduct triggered monitoring.

What is your fecal indicator?

- All Non-Transient Non-Community Water Systems, all Transient Non-Community Water Systems and each Community Water Systems serving 3,300 or fewer people shall use *E.coli* as the fecal indicator
- Community Public Water System serving greater than 3,300 people:
 1. If *E.coli* is detected in the TCR sample, the system shall use *E.coli* as the fecal indicator.
 2. If total coliform is detected in TCR samples without the confirmation of *E.coli*, the system shall use enterococci as the fecal indicator

What if your system treats or disinfects?

If your system provides treatment and concentration-time (CT) to achieve at least 99.99 percent (4-log) inactivation or removal of viruses, you must demonstrate that you consistently provide treatment that meets all GWR requirements, including continuous or daily monitoring of chlorine residual. Please note: PWSs should not assume that by chlorinating their drinking water or using UV disinfection that they will meet 4-log treatment. PWSs using a chemical disinfectant must complete a Log Credit Determination Form to determine the viral log treatment currently achieved by the system. This form is enclosed. Two copies of the form must be returned to the MassDEP/DWP, One Winter Street, Boston MA.

02108; Attention Drinking Water Program – Denise Springborg no later than September 1, 2009. If your PWS provides 4-log treatment, you must submit supporting documentation (in addition to completing the form) prepared by a Professional Engineer. Please call your MassDEP regional contact for more information on the approval process and future compliance monitoring requirements.

What can you do now to prepare for the GWR?

- Install or confirm the presence of a raw water sample tap at every well - located prior to any treatment – as required by the new regulations.
- Install an emergency disinfection injection port as required by the new regulations for all community and non-transient non-community systems.
- Protect the well and the surrounding area.
- Immediately correct any defects, failures, or malfunctions at the wellhead, treatment, storage, or distribution system that may cause the introduction of fecal contamination. Inspect your facility and review past MassDEP sanitary survey findings.
- Develop an Immediate and Long-Term Fecal Contamination Response Plan (see below) to address a potential fecal indicator positive at the source.
- Consider purchasing emergency disinfection equipment/supplies or making an arrangement for access to equipment and supplies.

How will you respond if fecal contamination occurs at your system?

To determine if each PWS has adequate capacity to comply with the GWR, all PWSs must complete the enclosed Immediate and Long-Term Fecal Contamination Response Form. By completing the form, PWSs will identify steps they will take for protecting public health in the event of a confirmed fecal contamination at the source. Two copies of the form must be sent to the MassDEP/DWP, One Winter Street, Boston MA, 02108; Attention Drinking Water Program – Denise Springborg no later than September 1, 2009. A copy of this form must be kept on site as part of your emergency response plan.

Is the MassDEP conducting GWR training for water suppliers?

To help PWSs understand and prepare for the GWR, the DWP is offering two hours of GWR rule training this spring as part of a one-day workshop for water suppliers. See the cover letter sent with this informational page for details on times and locations.

Additional Training:

- EPA will describe the GWR requirements at the NEWWA Spring Conference & Exhibition on April 2, 2009 at the DCU Center, Worcester.
- Hands on technical assistance and training sessions for small systems and their contract operators will be conducted by the Massachusetts Coalition for Small System Assistance. For information on receiving technical assistance or registering for training or a mentoring session, contact the Coalition at: <http://www.masmallwatersystem.org/>.

Where can you find more information about the GWR?

Systems should read the regulation, understand how it can impact their operation, and begin to assess their distribution system for possible sources of coliform and fecal contamination. The following information can be viewed at:

<http://www.mass.gov/dep/water/drinking/systems.htm#gwr>.

- General GWR Fact Sheet
- All GWR Forms
- Triggered Monitoring Fact Sheet
- Additional information to be developed

For more information or to discuss compliance options please call your regional GWR contact or Denise Springborg, Boston, at 617-574-6879.

Central: Kelly Momberger – 508-849-4023

Western: Jim Bumgardner – 413-755-2270

Northeast: Jim Dillon – 978-694-3231

Southeast: Mike Quink – 508-946-2766