

Connecticut H₂O Operator

A Newsletter for Certified Operators

The Connecticut Department of Public Health Drinking Water Section

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CONNECTICUT DEPARTMENT OF
PUBLIC HEALTH

Keeping Connecticut Healthy
www.dph.state.ct.us
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To Report a Water-Related Emergency...

CALL (860) 509-7333

(M-F 8:30a.m.-4:30p.m.)

OR...

CALL (860) 509-8000

(After Hours)



The Ground Water Rule

By: Eric McPhee, Sanitary Engineer 3, Capacity, Review & Standards Unit

The United States Environmental Protection Agency (EPA) developed the Ground Water Rule (GWR), 40 CFR Parts 9, 141 and 142, to provide for increased protection against microbial pathogens in public water systems that use ground water sources. This final rule is in accordance with the Safe Drinking Water Act. The final rule became effective on January 8, 2007. The compliance date for public water systems, unless otherwise noted, for rule requirements is December 1, 2009.

The GWR establishes a risk-targeted approach for groundwater systems that are susceptible to fecal contamination, instead of requiring disinfection for all ground water systems. The occurrence of fecal indicators in a drinking water supply is an indication of the potential presence of microbial pathogens that may pose a threat to public health. This rule requires ground water systems that are at risk of fecal contamination to take corrective action to reduce potential cases of illness and death from exposure to waterborne microbial pathogens. At risk groundwater systems would be identified through significant deficiencies identified during sanitary surveys or through fecal indicator monitoring of groundwater sources.

Groundwater public water supply systems that are currently considering upgrades or improvements to their sources of supply, storage facilities, or treatment systems should pay particular attention to the requirements of the GWR and assess the Rule's potential impact on the design and configuration of any proposed upgrades. Please also note that the GWR requires that all groundwater systems have the capability of sampling the raw water at each of their groundwater sources before any treatment as of December 1, 2009.

If you would like more information on the GWR, please visit EPA's GWR website (<http://www.epa.gov/ogwdw/disinfection/gwr/index.html>), the GWR section of the Drinking Water Section web site (www.ct.gov/dph), or contact Eric McPhee (860-509-7333, eric.mcphee@ct.gov).

Check Out the New DWS Web Site!

The Drinking Water Section has recently updated its web site in order to serve you better! We think you will find it informative and user friendly. We hope it will meet your public water system's needs and will be a useful resource.

To access the DWS web site, visit www.ct.gov/dph and click on *Programs and Services* at the top of the page. The DWS can be found under D. For the latest information on upcoming events, topics of interest and essential updates, frequently check the "What's New" section on the DWS web site.



Water, Water Everywhere... But Not A Drop to Waste!

By: Steve Messer, Supervising Sanitary Engineer, Planning Unit



The world is facing a global water crisis. The World Water Development Report commissioned by the United Nations estimates that two out of every three people worldwide will face water shortages by 2025. Several regions in our country are already facing crisis situations.

Connecticut enjoys relatively abundant water resources and as a whole has sufficient water to meet drinking water needs. The concern in Connecticut is that water is not always available where or when it is needed. Public water systems serve 84% of Connecticut's residents with 70% served by reservoirs. The remaining 16% of the population utilize private wells. Unfortunately, water resources are not uniformly distributed in Connecticut and centers of demand are constantly changing as more residents continue to move to the suburbs from major cities. These changing population trends and land use patterns place demands on some water systems that had not been anticipated.

The changing land use patterns and population trends along with recent uncertain precipitation patterns have all combined to leave Connecticut vulnerable to drought conditions. Connecticut entered a drought advisory in October 2007 and reservoir levels statewide were all below their normal historic levels with some approaching critically low levels. The substantial precipitation necessary to restore reservoirs to normal levels did not transpire this past fall season as usual and has finally just arrived with the start of 2008. The drought advisory was lifted on January 17, 2008 but we all need to remember that water is a finite resource and we have not a drop to waste. Please visit the following link: <http://www.ct.gov/dph/cwp/view.asp?a=3139&q=387302> on the DWS web site for the latest reservoir capacity data, conservation facts, and a link to the State of Connecticut Water Status home page where a wealth of drought related information can be found. Certified operators can also find simple, useful conservation facts that can assist in reducing supply demands at any size of public or private water system

The DWS recognizes that a combination of conservation, new technology, cooperation among competing interests for water, along with regional cooperation among neighboring communities and water utilities will be needed for Connecticut to remain ahead of the looming global water crisis. If you have any questions, please contact Steve Messer of the Planning Unit at 860-509-7333.

Stage 2 Disinfectants and Disinfection Byproducts Rule REMINDER- Schedule 4 Systems

By: Gary Johnson, Supv. Env. Analyst, Monitoring/Reporting & Enforcement Unit

The Stage 2 Disinfectants and Disinfection Byproducts Rule affects community water systems (CWSs) and non-transient non-community water systems (NTNCs) that either add a primary or residual disinfectant other than ultraviolet light, or deliver water that has been treated with a primary or residual disinfectant other than ultraviolet light. Systems are required to complete an Initial Distribution System Evaluation (IDSE) to characterize Disinfection Byproduct (DBP) levels in their distribution systems and identify locations to monitor DBPs for Stage 2 compliance.

Schedule 4 Systems under this Rule are CWSs serving < 10,000 people and not belonging to a combined distribution system in which any system serves < 10,000 people. In Connecticut there are 138 CWSs that are considered Schedule 4 Systems.

As a reminder, all Schedule 4 Systems that do not receive a Very Small System Waiver must complete ISDE requirements by submitting to the U.S. Environmental Protection Agency and the CT Department of Public Health Drinking Water Section by **April 1, 2008**, either a:

- ◆ Standard monitoring plan
- ◆ System specific study plan, or
- ◆ 40/30 certification

More information on the Stage 2 Disinfectants and Disinfection Byproducts Rule can be found on the Drinking Water Section's web site at www.ct.gov/dph. If you have any questions regarding these requirements please contact Christopher Roy of the Monitoring/Reporting and Enforcement Unit at 860-509-7333.



Water Knowledge Corner



By: Vicky Carrier, Sanitary Engineer 3, Operator Certification Program

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|--|--|---|
| <p>1. What is a commonly used indicator of possible health problems found in plants, soil, water and the intestines of humans and warm-blooded animals?</p> <ul style="list-style-type: none"> A. Viruses B. Coliform bacteria C. Intestinal parasites D. Pathogenic organisms | <p>2. Which source of water has the greatest natural protection from bacterial contamination?</p> <ul style="list-style-type: none"> A. Shallow well B. Deep well in gravel C. Surface water D. Spring | <p>3. Calculate the volume, in gallons, of a tank that is 75 feet long, 20 feet wide, and 10 feet deep.</p> <ul style="list-style-type: none"> A. 15,000 gallons B. 112,200 gallons C. 150,000 gallons D. 224,400 gallons |
|--|--|---|

These questions are excerpts from the Very Small Water System Operators' Guidebook to Preparing for Certification. The full document is available at the following link: <http://www.abccert.org/articles/vswsgdbk.pdf>.

If you are intending to take an operator certification examination (Small System, Class I or Class II) in the near future, it would be helpful to review this document. Operator exams are offered twice yearly. The next set of exams will be offered on June 3rd and 4th 2008 (application deadline is April 14th, 2008). Visit the Drinking Water Section's web site, www.ct.gov/dph, for more operator examination information.

- Answers-**
- 1. B. Coliform bacteria. Reference: *Water Distribution System Operation and Maintenance*, California State University, Ch. 6.
 - 2. B. Deep well in gravel. Reference: *Small Water System Operation and Maintenance*, California State University, Ch. 3.
 - 3. B. Solution: $75 \text{ ft} \times 20 \text{ ft} \times 10 \text{ ft} = 15,000 \text{ cu ft}$ $15,000 \text{ cu ft} \times 7.48 \text{ gal/cu ft} = 112,200 \text{ gal}$. Reference: *Small Water System Operation and Maintenance*, California State University, Appendix.



Picture Quiz

Question:

This is a photo of the last wooden tank serving a public water system in Connecticut that was taken out of service in the late 1990's. What Public Health Codes violations do you think are possible from looking at the photo?

Answers-

RCSA Section 19-13-B102(f)(5)(A) states that tanks "shall be constructed and located so as to adequately protect the water from contamination." It is likely that this tank has some flaws in its construction that would not adequately protect it from contamination. RCSA Section 19-13-B102(f)(5)(D) bans uncovered storage tanks. Although the wooden storage tank pictured is covered with a tarp, this would not be considered a proper cover. Finally, RCSA Section 19-13-B102(f)(5)(C) states: "All atmospheric finished water storage tanks, basins and clearwells shall be inspected at a minimum of once every ten years for sanitary conditions and structural integrity." It is unlikely that the one pictured above is structurally sound or sanitary.

Save the Date!



February 26, 2008 – The Connecticut Section American Water Works Association’s 12th Annual Technical Conference and Vendor Exposition (ATCAVE)

The Drinking Water Section (DWS) will provide scholarships to small community and non-community public water systems to attend ATCAVE 2008. The DWS will also be presenting on various drinking water topics, including the Ground Water Rule, drinking water issues at food service establishments, and asset management. Certified Operators may receive continuing education credits for the courses they attend. The event will be held on February 26th, 2008 at the Crowne Plaza Hotel in Hartford-Cromwell. Please visit CTAWWA’s web site, www.ctawwa.org/, for registration information.

Don’t miss this event! You’ll also get the opportunity to network with local health department officials who you will likely deal with in the event of violations or other emergency events. We look forward to seeing you there!

April 23, 2008 – “Careers in Drinking Water”

The DWS, in partnership with the Connecticut Section of the American Water Works Association and other State agencies, is sponsoring a free ½ day forum presenting a wide array of exciting drinking water career opportunities. The second annual “Careers in Drinking Water” program will be held on April 23rd, 2008 at the Farmington Club, Farmington, from 8:30 am to 12:45 pm. The program is aimed at students, high school guidance counselors and educators to increase awareness of careers that are available in the drinking water field. A working lunch will include a panel discussion of various representatives from the water utility industry, educators and regulators. Visit the DWS’s web site, www.ct.gov/dph, for more information. This is a great opportunity for middle and high school teachers and students, pass the word around!

Training Registration Information



All training registrations must be completed on the Training Finder Real-time Affiliate Integrated Network (TRAIN). TRAIN is a training resource for professionals who protect the public’s health. Visit the TRAIN web site, <https://ct.train.org/DesktopShell.aspx> to create a free user account and view upcoming certified operator events.

Be sure to check out the DWS’s web site, www.ct.gov/dph, for the latest information on trainings, events, and more!

This newsletter was prepared by the DWS’s Operator Certification Unit and Programs Unit. If you have any questions or would like to contribute to the newsletter, please contact Vicky Carrier or another OCP staff person listed below.

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